0121_CWA_AmRiversEtAl

From: Steve Mashuda
To: PSMP
Subject: Comments on Public Notice No. CENWW-PM-PD-EC 13-01
Date: Tuesday, April 30, 2013 1:50:48 PM
Attachments: 404 permit comments.pdf

Ms. Shelin:

Please see the attached copy of comments regarding the Corps' Public Notice No. CENWW-PM-PD-EC 13-01.

A courtesy hard copy will follow by U.S. Mail.

Please confirm receipt of this message.

Thank you for your consideration.

Sincerely,

Steve Mashuda

Steve Mashuda
Earthjustice
705 Second Ave., Suite 203
Seattle, WA 98104
P:(206) 343-7340 ext. 1027
F: (206) 343-1526
www.earthjustice.org

April 30, 2013

U.S. Army Corps of Engineers
Walla Walla District
Attention: Sandra Shelin, CENWW-PM-PD-EC
201 North Third Avenue
Walla Walla, Washington 99362-1876
psmp@usace.army.mil

via electronic mail and U.S. Mail

Re: Comments on Public Notice No. CENWW-PM-PD-EC 13-01

Dear Ms. Shelin:

This letter is written on behalf of American Rivers, Earthjustice, Friends of the Clearwater, Idaho Rivers United, Institute for Fisheries Resources, Borg Hendrickson, Linwood Laughy, Pacific Coast Federation of Fishermen's Associations, Save Our Wild Salmon, and Sierra Club, in order to comment on proposed dredging activities in 2013-2014 associated with the Corps' Lower Snake River Programmatic Sediment Management Plan ("PSMP"). The dredging activities are identified in the Corps' March 11, 2013 Public Notice No. CENWW-PM-PD-EC 13-01 ("Public Notice"). On March 26, 2013, these groups and individuals submitted comments on the Draft Environmental Impact Statement ("DEIS") for the PSMP prepared by the Army Corps of Engineers ("DEIS Comments"). We attach and incorporate those comments by reference and offer these additional comments on the proposed issuance of a Section 404 permit for the Corps' 2013-2014 proposed maintenance dredging of the Lower Snake River.

The DEIS comments discussed in considerable detail the deficiencies of the DEIS under the National Environmental Policy Act ("NEPA"), as well as the major shortcomings of the PSMP generally. While there is overlap between the requirements of NEPA and the review required under the Clean Water Act, these comments detail the additional reasons the proposed dredging activities falls short of the substantive requirements necessary to obtain a Section 404 permit under the Clean Water Act.

general opposition; costs and funding

I. GENERAL COMMENTS.

We have three major concerns with the dredging presented in the Public Notice . First, the Public Notice indicates the Corps' intention to move forward in implementing its PSMP. As explained in the DEIS comments for the PSMP, we are strongly opposed to the PSMP and believe that the Corps has not adequately analyzed its effects, nor considered the full suite of costs and benefits of its proposals. While the Corps alleges in both the Public Notice and the DEIS that the need to dredge is both immediate and inevitable, the Corps has not provided sufficient information to evaluate these characterizations. Indeed, it is the Corps' own action and inaction (along with its erroneous legal position) that leads to both of these conclusions. In 2005, several organizations entered a settlement agreement with the Corps to allow dredging to occur in the winter of 2005-2006 and requiring the Corps to complete an analysis of options to manage

Environmental laws and regulations

sediment in the Lower Snake River.[1] While sediment accumulation in the navigation channel under current conditions is a predictable event, the Corps took over seven years to issue a draft of this study (four years later than originally anticipated). After this prolonged process, the Corps now seeks to move ahead with the PSMP while the public review process for that proposal is underway and well before the Corps can permissibly issue a final EIS or make a formal decision at the end of the NEPA process. Indeed, the public comment period for the DEIS had not closed before the Corps indicated its intent to move forward with that plan by proposing the issuance of a Section 404 permit. Rather than rush to proceed with what appears to be the Corps' foregone conclusion to maintain the channel though dredging this winter, the Corps must address the public's and other agencies' concerns about the shortcomings of its analysis in the DEIS and complete the NEPA process.

Environmental laws and regulations

Second, the Public Notice does not explain how the Corps will satisfy the substantive provisions of the Clean Water Act in executing its proposed 2013-2014 dredging or the PSMP. In contrast to NEPA, which imposes a set of procedural requirements on federal agencies pursuing a major federal action, Section 404 of the Clean Water Act ("CWA"), 33 U.S.C. § 1344, imposes substantive requirements that must be met before the Corps may issue a permit for the discharge of pollutants into waters of the United States.[2] In evaluating whether a permit should issue, the Corps must follow its own regulations as well as the 404(b)(1) guidelines promulgated by the Environmental Protection Agency ("EPA"). *See* 33 C.F.R. §§ 320-325, and 40 C.F.R. § 230. The Corps has neither demonstrated compliance with the CWA nor its own regulations.

Environmental laws and regulations

Third, we are concerned that the Corps apparently intends to rely on the DEIS to satisfy its CWA obligations. *See* Public Notice at 9. Even if the DEIS had adequately analyzed the impacts of the PSMP – and it did not – there is a fundamental disconnect between the broad scope of the actions analyzed in the DEIS and the specificity of the actions that must be analyzed before the Corps can issue a 404 permit under the CWA. Indeed, the action proposed in the Public Notice is different than the dredging outlined in the DEIS in its scope – and therefore in environmental effects and socioeconomic costs. This disconnect between the two projects prevents the Corps from blindly relying on its DEIS to support its actions here. The 404 permit must include a full, comprehensive public interest review and analysis necessary to fulfill the 404 (b)(1) guidelines.[3] Moreover, while the Public Notice that states the Corps' view that it

---

[1] *See* Stipulated Order of Dismissal in *National Wildlife Fed'n. v. U.S. Army Corps of Engineers*, 2:02-cv-2259-RSL (Sept. 8, 2005).

[2] *Sierra Club v. U.S. Army Corps of Engineers*, 772 F.2d 1043, 1051 (2nd Cir. 1985) (holding that "[l]ike NEPA, the Clean Water Act requires that an environmental concern—here the impact on the aquatic environment—be considered at an early enough stage in the policymaking process to affect the agency decision. But the Clean Water Act provides for a more intrusive power of review, one whose purpose is to prohibit agency action whenever certain environmental impact thresholds are met."). *See also* 40 C.F.R. § 230.10.

[3] The Corps has applied to the Washington Department of Ecology for certification that the dredging complies with the State's water quality standards. We incorporate by reference our comments, submitted April 30, 2013, to Washington.

Environmental laws and regulations

"does not need" a Section 401 permit from Idaho, Public Notice at 10, dredging under the proposed 404 permit will take place in Idaho (such as at the Port of Lewiston) and will result in discharges in Idaho. The Corps must seek certification for those discharges.

II. A PUBLIC INTEREST REVIEW PURSUANT TO THE CLEAN WATER ACT CANNOT BE BASED SOLELY ON INFORMATION CONTAINED IN THE DEIS FOR THE PSMP.

Before the Corps may issue a 404 permit authorizing dredging under the Clean Water Act, it must conduct a public interest review pursuant to 33 C.F.R. § 320.4. "The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case," including environmental and socioeconomic factors. 33 C.F.R. § 320.4(a). The Corps, in its Public Notice, acknowledges that it must base its decision whether to perform the dredging on a public interest review.

Aquatic resources; threatened and endangered species (aquatic)

The only discussion of environmental impacts in the Public Notice for the Winter Dredging proposal, however, is a short paragraph incorporating by reference the impacts discussed in the DEIS. Public Notice at 9. As we have explained, the Corps' evaluation of environmental impacts in the DEIS is insufficient and fails to provide a foundation from which the Corps may conduct an adequate public interest review. Some, but not all, of the relevant concerns raised in comments on the DEIS include:

- The Corps relied on its unsupported assumption that fish protected under the ESA will not be harmed by dredging because of the in-water work windows. But as the Corps admitted, Snake River steelhead and Snake River fall chinook are both likely to be in the reservoirs when dredging occurs, yet the Corps did not suggest or analyze measures to mitigate any impacts from dredging (including turbidity and water quality, and the effects of plumes of suspended sediments affecting fish downstream of the dredge locations). Nor did the Corps consider the impacts of dredging on spawning habitat.

- The Corps overstates the environmental benefits of the proposed dredging activities. The Corps assumes that in-river disposal will create beneficial juvenile salmon habitat, but does not assess the extent to which that habitat may become useless because of continued warming in the Lower Snake River.[4]

Dredged materials disposal

[4] In the Public Notice, the Corps states that using dredge spoils for this habitat creation requires cobbles from the Ice Harbor lock approach, but does not discuss in the Public Notice or DEIS whether sufficient cobble material is available, nor where it proposes to obtain any necessary cobble now or in the future.

Socioeconomics; rail

Costs and funding

- The Corps has presented an incomplete and inadequate picture of the costs and benefits of the PSMP and of the dredging elements in particular. Readily available evidence demonstrates that the costs of the Corps' preferred alternative outweigh any benefits. For example, the assertion that barge transportation provides benefits because it is an inexpensive and efficient means for transporting goods, is based on irrelevant and outdated information. More recent and specific evidence demonstrates that rail transportation uses less fuel (and has lower emissions) than barge traffic, largely because it reduces the number of miles trucks must travel to reach facilities. As long ago as 2001, a study concluded that cessation of commercial barge traffic on the Snake River would save 12.1 billion BTUs of energy use each year.[5] More recent studies indicate even greater reductions from improved rail capacity.[6] The Corps' failure to evaluate these and other true costs and benefits in the DEIS is particularly relevant in the Clean Water Act context because the Act requires the Corps to perform a thorough cost-benefit analysis to determine whether issuance of the 404 permit is in the public interest. 33 C.F.R. § 320.4(a) (requiring "a careful weighing of all those factors which become relevant in each particular case."). *See also* Public Notice at 11 (noting that the "benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effect thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use [. . .] and, in general, the needs and welfare of the people.").

Range of alternatives

- The Corps did not adequately consider or discuss a full range of alternatives, including a true "no action" alternative, other transportation options in the Lower Snake River corridor, or other options that would provide water transportation without the need for dredging.

Cumulative effects

- The Corps did not adequately consider reasonably foreseeable cumulative impacts that affect the same resources impacted by this proposal, nor did it consider the impacts of reasonably foreseeable ongoing and future activities and events such as water temperature impacts and sediment volume increases from climate change.

Finally, as we stated earlier, the Corps cannot rely on the DEIS to satisfy its CWA obligations. Even if the DEIS did adequately analyze the impacts of the PSMP—and it did not—there is a fundamental disconnect between the broad scope of the actions analyzed in the DEIS and scope and specificity of the actions that must be analyzed before the Corps can issue a 404

[5] Ball, Trent and Casavant, Ken, "Impacts of a Snake River Drawdown on Energy and Emissions Based on Regional Energy Coefficients," University of Washington Dept. of Civil Engineering and Washington State University Department of Agricultural Economics, 2001.
[6] *See* Port of Whitman. 2012. *P&L Shortline Railroad Bridge Replacement and Shuttle Loader: TIGER Discretionary Grant*. Retrieved 12 March 2013 from http://www.portwhitman.com/Narrative%20Final.pdf; Washington State Department of Transportation, S. Peterson, and J. Tee. 2012. *Benefit-Cost Analysis Summary*. Retrieved 11 February 2013 from http://www.portwhitman.com/Benefit-Cost%20Analysis.pdf

permit under the CWA. The DEIS nominally contemplates a programmatic management plan, while the 404 permit would cover dredging for the upcoming winter season, only. While many of the issues will certainly be similar, the DEIS for the PSMP lacks details unique to this dredging proposal. Indeed, the dredging proposed in the Public Notice includes more than 69,368 additional cubic yards of material than what was presented in the DEIS. The sediment volume presented in the Public Notice conflicts with information presented in the DEIS. According to Appendix F of the DEIS, the Corps must remove approximately 700,000 cy of sediment per year to maintain a 14-foot channel. Thus, the 491,000 cubic yards presented in the Public Notice does not appear to maintain the channel for more than one year. The Corps presents inadequate information to determine whether the volumes presented in the PSMPS DEIS are inaccurate or whether those presented in the Public Notice underestimate the dredging volume for 2013-2014. Before the proposed dredging is permitted, the Corps must consider independently the factors listed in 33 C.F.R. § 320.4, especially "general environmental concerns… fish and wildlife values … and water quality." It has not provided any evidence that it has done so for the specific project it is proposing.

III. THE CORPS HAS NOT SHOWN HOW THE PROPOSED WINTER DREDGING WOULD COMPLY WITH THE 404(B)(1) GUIDELINES.

The Corps' regulations governing the public interest review state that, "for activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines." 33 C.F.R. § 320.4(a). Those EPA guidelines provide specific criteria which enable the Corps to determine whether the dredging complies with Section 404(b)(1) of the Clean Water Act. 40 C.F.R. § 230; 33 U.S.C. § 1344(b)(1).

The 404(b)(1) guidelines mandate that a permit be denied under a number of circumstances. The Corps must deny a permit when, for example: (1) there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem; (2) when, based on factual determinations outlined in 230.11, the Corps determines that the discharge will cause or contribute to significant degradation of the waters of the United States; (3) when the proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; and finally (4) when there is insufficient information to make a reasonable judgment as to whether the discharge will comply with the guidelines. 40 C.F.R. § 230.12. Each of these factors is particularly relevant to the Corps' review here.

The Corps gives no indication in its Public Notice as to how it plans to comply with these, and other, 404(b)(1) Guidelines. We are concerned that the Corps will issue the permit without conducting the proper analysis or making the appropriate factual determinations as required under 404(b)(1). As with the public interest review, we must assume that the Corps intends to use the contents of its DEIS to satisfy the 404(b)(1) analysis. This would not suffice. As the Environmental Protection Agency has pointed out in its comments on the DEIS, the document does not "appear compliant with the 404(b)(1) Guidelines." EPA comments on DEIS (Mar. 26, 2013) at 11-12. The 404(b)(1) Guidelines impose unique substantive requirements, and the Corps must comply with these requirements. Compliance with the 404(b)(1) Guidelines

Environmental laws and regulations

NEPA; range of alternatives

requires the Corps to complete an analysis that includes, but is not limited to, the following criteria.

A. The Corps Cannot Rely On Its Inadequate Analysis Of Alternatives In The DEIS To Comply With 40 C.F.R. § 230.10(a).

Section 230.10(a) of the guidelines mandate that a permit application be denied where there is "a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). If the proposed action is subject to NEPA, the analysis of alternatives in the NEPA document may be sufficient for evaluation of alternatives under the Clean Water Act. However, "on occasion, these NEPA documents…may not have considered the alternatives in sufficient detail to respond to the requirements of these Guidelines." 40 C.F.R. § 230.10(a)(4).

That is precisely the case here. As stated in our DEIS comments, the alternatives considered in the DEIS by the Corps will not be sufficient in determining whether any practicable alternatives exist because the Corps did not adequately consider non-dredging alternatives that would obviate the need for this project and because the programmatic evaluation in the DEIS does not focus on the specific details of this proposal. The seven alternatives the Corps presented in the DEIS substantially overlap with one another and all are built upon the legally incorrect assumption that the Corps must maintain a fourteen-foot channel at all times of the year. Non-dredging or reduced dredging alternatives, such as dam removal, sediment flushing through reservoir drawdown, or lighter barge traffic, were ignored. Indeed, although Appendix F of the DEIS concluded that "[p]eriodic drawdown of the reservoir as a means to erode sediment from the confluence area appears feasible," App. F. at 20 and 126-32, the DEIS dismissed this alternative action as inconsistent with its purpose and need. DEIS at 2-24. This failure to look at sufficient alternatives renders the Corps unable to assess whether there are any practicable alternatives to the dredging proposal that would have a lesser impact on the environment. A permit cannot legally issue until all viable alternatives have been evaluated for their relative impacts and the Corps has determined that there is no practicable alternative that would have less adverse effect. Additionally, the alternatives considered in the DEIS pertained to a long-term management plan, not a specific dredging activity. If the Corps intends to rely solely on its DEIS to determine whether there are practicable alternatives, it will be in violation of Section 404 of the Clean Water Act.

B. The Corps Has Failed To Show That The Proposed Dredging Activities Will Not Result In Significant Degradation Of The Waters Of The United States.

The EPA guidelines prohibit the issuance of a 404 permit where the discharge of the dredge or fill material, "will cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(b). The Corps must make factual determinations based on criteria included in the guidelines to determine whether significant degradation would occur. The criteria include physical substrate determinations; water circulation, fluctuation, and salinity determinations; suspended particulate-turbidity determinations; contaminant determinations; aquatic ecosystem and organism determinations; proposed disposal site determinations; determination of cumulative effects on the aquatic ecosystem; and determination of secondary

Water, and sediment quality; water quality

Aquatic resources; general aquatic

effects on the aquatic ecosystem. *See* 40 C.F.R. § 230.11. Subpart C of the Guidelines describe in detail the potential impacts that correspond with the criteria used for the factual determinations in 230.11 (e.g. impacts to "substrate" from the discharge of dredged material may include change in the complex physical, chemical, and biological characteristics of the substrate). If, based on factual determinations, the project would cause or contribute to significant degradation, the Corps must reject the proposal. The Corps must set forth in writing its factual determinations and finding of compliance or non-compliance. 40 C.F.R. § 230.12(b).

The Corps has thus far failed to make the factual determinations under the 404(b)(1) Guidelines to determine whether the proposed dredging would cause significant degradation of the waters of the United States. And again, the Corps gives no indication in its Public Notice as to how or when it intends to conduct this statutorily-required analysis.

C. The Corps has Not Shown How It Will Minimize Adverse Impacts

Finally, the Guidelines require that all appropriate and practicable steps be taken to minimize potential adverse impacts of the discharge on the aquatic system before the Corps may issue a permit. Aside from the overly optimistic hope that habitat will be created by removing sediment from one part of the river and replacing it in another, there is no detailed discussion as to how the Corps plans to mitigate for the impacts of the project.

D. Cumulative Effects

Cumulative effects

We refer the Corps to our DEIS comments at 17-19 for a more complete discussion of the DEIS's deficiencies in analyzing cumulative effects. The Corps cannot rely on that analysis here and must complete an independent, and truly comprehensive, analysis of cumulative effects both as part of the public interest review and as required by the 404(b)(1) Guidelines. This analysis must include the proposed dredging in the context of the PSMP and the cumulative impacts of the activities contemplated in that plan.

CONCLUSION

We urge the Corps to engage in a full public interest review, including details on how it will satisfy the 404(b)(1) Guidelines, before it issues the 404 permit for Winter 2013-2014 dredging activities. In contrast to the DEIS, this review must be searching, comprehensive, and substantive to pass muster under the CWA. Unless and until the agency completes an adequate assessment of the impacts of this action under NEPA and the CWA, the Corps must deny the permit.

We appreciate the opportunity to comment on this Public Notice. If you have any questions about these comments, or would like to discuss any matter discussed in these comments, please contact any of the undersigned.

Environmental laws and regulations

Sincerely,

/s/

Steve Mashuda
Matt Baca
Earthjustice
705 Second Ave
Suite 203
Seattle, WA 98112
smashuda@earthjustice.org
mbaca@earthjustice.org

Michael Garrity
Washington State Conservation Director
American Rivers
608 N Sheridan Ave
Tacoma, WA 98403

Gary Macfarlane
Ecosystem Defense Director
Friends of the Clearwater
PO Box 9241
Moscow, ID 83843

Kevin Lewis
Conservation Director
Idaho Rivers United
PO Box 633
Boise, ID 83701

Linwood Laughy
Karen S "Borg" Hendrickson
5695 Highway 12
Kooskia, Idaho 83539

Glen Spain
Pacific Coast Federation of Fishermen's Associations
and Institute for Fisheries Resources
PO Box 11170
Eugene, OR 97440-3370

Pat Ford
Executive Director
Save Our Wild Salmon
200 First Ave. West
Suite 107
Seattle, WA 98119

Edwina Allen
Chair, Idaho Chapter of the Sierra Club
PO Box 552
Boise, ID 83701

ATTACHMENT

AMERICAN RIVERS • CITIZENS FOR PROGRESS • EARTHJUSTICE • FRIENDS OF THE CLEARWATER • BORG HENDRICKSON • LINWOOD LAUGHY • IDAHO RIVERS UNITED • INSTITUTE FOR FISHERIES RESOURCES • PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS • SAVE OUR WILD SALMON • SIERRA CLUB • WILD STEELHEAD COALITION

March 26, 2013

U.S. Army Corps of Engineers,
Walla Walla District
PSMP/EIS, Attention: Sandy Shelin, CENWW-PM-PD-EC,
201 North Third Avenue
Walla Walla, Washington 99362-1876
psmp@usace.army.mil

via electronic mail and U.S. Mail

Dear Ms. Shelin:

This letter is written on behalf of American Rivers, Citizens for Progress, Earthjustice, Friends of the Clearwater, Borg Hendrickson, Linwood Laughy, Idaho Rivers United, Institute for Fisheries Resources, Pacific Coast Federation of Fishermen's Associations, Save Our Wild Salmon, Sierra Club, and Wild Steelhead Coalition to comment on the Draft Environmental Impact Statement ("DEIS") for the Lower Snake River Programmatic Sediment Management Plan ("PSMP") prepared by the U.S. Army Corps of Engineers ("Corps"). We appreciate this opportunity to comment on the Corps' DEIS.[1]

Representing the voices of more than 6,000,000 people, these individuals and organizations share a common goal of restoring Snake and Columbia River Salmon to healthy, sustainably harvestable levels. Many of these groups were involved in litigation in 2002 and 2004 over the Corps' previous plans to dredge the navigation channel in the Lower Snake River. That litigation was settled in 2005 to allow interim dredging while the Corps completed a comprehensive long-term study of sediment management options for the navigation channel. For salmon advocates and others, that study presented the opportunity to consider a broad range of alternatives to business-as-usual in the Lower Snake River and to consider the environmental, economic, and social impacts of a number of different alternatives that allow goods to move to markets, provide for recreational and commercial uses of the river, and that would enhance and restore salmon and steelhead populations.

Unfortunately, the Draft EIS for the PSMP does not seize that opportunity. Instead, after over seven years of study and at least $16 million dollars spent so far, the Corps has returned with a proposal that once again asks a the same narrow question and answers it with the same

[1] We and other interested parties had requested an extension of the comment deadline for this DEIS. Thank you for your consideration with regard to this extension.

foregone conclusion: dredging. But the Corps' analysis is based on outdated and incorrect assumptions about the benefits of maintaining the navigation system and incomplete consideration of the harms and costs imposed by that continual maintenance. There is far more public information relevant to the Corps' decision than presented in the DEIS, which the Corps has apparently failed to consider. For example, the Corps' unanalyzed assumptions about the net economic benefits of the navigation system are no longer valid, even if they may have been at some time. To the contrary, the most up-to-date available information shows that the costs of the existing system are approximately double the benefits provided; dredging to maintain the channel will return less than a dollar in benefits for every dollar spent. Cargo moving down the river has declined dramatically in the past decade, and alternative options to ship goods for export will likely accelerate that decline. Climate change will continue to alter the landscape that influences the Snake River, exacerbating the sediment build-up behind the dams, driving up the costs of channel maintenance over time. Climate change will also make an already too-hot river even hotter for salmon, steelhead, and other cold-water fish. Salmon and steelhead that depend on the Lower Snake River to access the cold-water refugia in the central Idaho wilderness continue to decline and are in dire need of a scientifically and legally valid restoration plan. Flood risk from the buildup of sediment behind Lower Granite dam (regardless of dredging the narrow navigation channel) continues to threaten Lewiston, Idaho and will require difficult and expensive choices about the existing levee system during the period of the PSMP. On top of all of this, new opportunities exist for regional stakeholders to together craft solutions that would save salmon, enhance clean energy, and develop more efficient and economical transportation options while retaining and enhancing the non-barging economic benefits provided by port facilities.

The Corps should not pretend that Snake River navigation system exists independently of these other important factors and must explore the relative benefits of alternatives to continued harmful and expensive dredging. If nothing else, the Corps should not be moving ahead with a major long-term project with serious impacts to the river and river communities without the hard look the region deserves at all of these issues and transparent consideration of the all the costs (environmental, economic, social) of continuing the business-as-usual approach that the Corps prefers. The law – including the National Environmental Policy Act, Endangered Species Act, Clean Water Act, and Northwest Power Act – demands it. To satisfy these requirements, the Corps must significantly alter its approach to the analysis in the DEIS and complete an analysis that provides the information necessary for the public and the Corps to make an informed decision. The following comments are meant both to identify many of the flaws in the DEIS and to provide the Corps with the information and framework necessary to fulfill the purposes of NEPA.[2]

I. THE DEIS DOES NOT FULFILL THE LEGAL REQUIREMENTS OF NEPA.

The fundamental purposes of NEPA are to guarantee that: (1) federal agencies take a "hard look" at the consequences of their actions before the actions occur by ensuring "that the agency, in reaching its decision, will have available, and will carefully consider, detailed

[2] We support the comments submitted by the Nez Perce Tribe on this DEIS and incorporate them here by reference. Where applicable, we emphasize specific elements of those comments below.

information concerning significant environmental impacts," *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989); and (2) "the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision," *id.* at 349; 40 C.F.R. § 1502.1 (EIS "shall" inform decision-makers and public of reasonable alternatives and environmental impacts); *see also Marsh v. ONRC*, 490 U.S. 360, 369 (1989) ("NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action."). In short, NEPA requires federal agencies to look before they leap.

To satisfy the requirement that it take a "hard look" at the environmental consequences of its actions, an agency must engage in a "reasoned evaluation of the relevant factors" to ensure that its ultimate decision is truly informed. *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992). The DEIS must be searching, detailed and comprehensive; "[g]eneral statements about 'possible' effects and 'some risk,' do not constitute a 'hard look' absent a justification for why more definitive information could not be provided," *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1380 (9th Cir. 1998). An agency's failure to include and analyze information that is important, significant, or essential renders an EIS inadequate. Without such detailed information, there is no way for the public or the agency to adequately assess the impacts of a proposed action. *See California v. Belgrade*, 483 F. Supp. 465, 495 (E.D. Cal. 1980), *aff'd sub nom, California v. Block*, 690 F.2d 753 (9th Cir. 1982) (by failing to disclose key data, "the Forest Service effectively undercut the twin goals of environmental statements: informed decision-making, and full disclosure").

It is hence of critical importance that an EIS be factually accurate and well supported. 40 C.F.R. § 1502.24 (agencies must ensure the scientific integrity of an EIS). An agency's failure to use the most up-to-date information and tools available undermines the public's confidence in the EIS and renders it legally defective. *Tribal Village of Akutan v. Hodel*, 869 F.2d 1185, 1192 n.1 (9th Cir. 1989) (EIS "which is incomplete due to the omission of ascertainable facts, or the inclusion of erroneous information, violates the disclosure requirement"); *Seattle Audubon Soc. v. Espy*, 998 F.2d 699 (9th Cir. 1993) (agency cannot rely on "stale" science or "ignore reputable scientific criticism"); *Coleman*, 521 F.2d at 676 (rejecting agency position that uncertainty is grounds for not disclosing potential impacts). While "perfect" knowledge is not required, the EIS at least is required to disclose data gaps and the basis for assumptions. 40 C.F.R. § 1502.22 (agency shall make clear where information is inadequate or unavailable).

As detailed further below, the PSMP DIES fails to satisfy these requirements: its purpose and need is impermissibly narrow, it fails to consider an adequate range of alternatives, it fails to consider the full impacts of the proposed alternative and the cumulative impacts, and it fails to present a full picture of the economic and social costs and benefits of the alternatives. The sum total of these shortcomings are a DEIS that fails to inform the public or decision-makers about the consequences of the proposed – or any other –action.

II. THE CORPS' NARROW PURPOSE AND NEED STATEMENT IS BASED ON AN ERRONEOUS LEGAL CONCLUSION.

Although the Corps continues to believe otherwise, Congress has never indicated that navigation – via a fourteen-foot or any other depth of channel – must be preserved at all times on the Snake River. Congress originally authorized the Snake River navigation system with the Rivers and Harbors Act of 1945. *See* Pub. L. No. 79-14 (1945), *adopting* H.R. Doc. No. 75-704. According to the authorizing legislation, the four lower Snake River dams are authorized to provide for slackwater navigation, irrigation, and power generation. *Id*. The authorizing report indicates that the lower Snake River dams would provide navigation on average for ten months a year. H.R. Doc. No. 75704, at 9, 39.

The Flood Control Act of 1962, which authorizes several new projects, includes a provision that reads: "The depth and width of the authorized channel in the Columbia-Snake River barge navigation project shall be established at fourteen feet and two hundred and fifty feet, respectively, at minimum regulated flow." Flood Control Act of 1962 Pub. L. No. 87-874, 76 Stat. 1173, 1193(Oct. 23, 1962). Minimum regulated flow is not defined. Nothing in the 1962 Act alters or qualifies Congress's expectation that navigation through the project would be unavailable a few months each year, as indicated in House Doc. 704. Instead, when it passed the Flood Control Act of 1962, Congress was operating with the background of House Document number 704. Congress is presumed to know that law and is presumed to know the background against which it passed the 1962 Flood Control Act. *See South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 351 (1998) (citing *Miles v. Apex Marine Corp.*, 498 U.S. 19, 32 (1990)). If Congress meant to reverse course and require the Corps to maintain a fourteen-foot channel depth 365 days a year, it would have said so explicitly. *See In re Operation of the Mo. River Sys. Litig., 363 F. Supp. at 1151*. Absent "a clearly expressed congressional intention," repeals by implication are disfavored. *Branch v. Smith*, 538 U.S. 254, 273 (2003) (citations omitted).

Moreover, the Corps' authority to provide for navigation as part of the projects is not dominant over other uses and purposes of the River but is one of many Congressionally-authorized uses. The Snake River projects are authorized to fulfill multiple other purposes equally on par with navigation. For example, in the Northwest Power Act, 16 U.S.C. §839 *et seq.*, Congress provided a clear and "affirmative conservation mandate" for the agencies to protect fish and wildlife, specifically including salmon. 16 U.S.C. § 839b(h)(11) (requiring "equitable treatment" of fish and wildlife). *See also NRIC v. Northwest Power Planning Council*, 35 F.3d 1371, 1388 (9th Cir. 1994) (Act passed to put fish and wildlife "on par with energy" and other uses/purposes of the dams).[3] Congress requires the Corps to consider several purposes – including fish and wildlife conservation, power generation, recreation – rather than to pursue navigation alone at the expense of all other uses. Were Congress to wish to require the Corps to maintain a fourteen-foot channel at all times of the year, at the expense of all other uses

[3] The ESA similarly mandates that the Corps take no action that will jeopardize listed species or adversely modify critical habitat. That provision is unambiguous, and in our view, requires that the Corps further consider additional scenarios and alternatives, such as alternative means of moving goods through this corridor, that would have less impact on salmon.

the Snake River system, it could certainly do so through a clear expression of intent, but it has chosen not to do so. *See Yankton Sioux Tribe*, 522 U.S. at 351; *Branch*, 538 U.S. at 273.

In a similar case, the Eighth Circuit found that the Flood Control Act of 1944 did not mandate a particular length of navigation season in the Missouri River, instead finding that it requires the Corps to consider navigation in addition to other competing interests. *In re Operation of Mo. River Sys. Litig.*, 421 F.3d 618, 631 (8th Cir. 2005). In that case, the district court found that nothing in the statute or case law required the Corps to maintain a specific channel depth, especially at the expense of other uses of the River. *See In re Operation of the Mo. River Sys. Litig.*, 363 F. Supp. 2d 1145, 1151 (D. Minn. 2004) *aff'd in part, vacated on other grounds in part*, 421 F.3d 618 (8th Cir. 2005). The same is true here – Congress made no such express provision in either the Flood Control Act of 1962 or any other statute to give priority to navigation or to elevate a specified channel depth over other uses of the river.

Given that Congress has neither mandated a fourteen-foot channel nor the promotion of navigation without consideration of other goals, the Corps cannot credibly assert that Congressional "authorization" to maintain a particular channel depth is the same as an absolute *requirement* from which it cannot vary no matter the circumstances. A few miles downstream, the Corps has demonstrated as much. The Columbia River authorized navigation channel depth is 27 feet to the Dalles Dam. Nonetheless, the Corps admits that it is only maintained to a 17 foot depth to reflect "the needs of vessels using this reach." U.S. Army Corps of Engineers, *Dredged Material Management Plan and Environmental Impact Statement* (Final: July 2002) at 1-4. There is no principle of law or logic that would allow the Corps to claim that Congress's authorization on the Columbia allows Corps discretion but that the same is not also true on the Snake. Indeed, the Corps has historically exercised its discretion not just to decrease the channel depth but to halt all navigation on the Snake and/or the Columbia for weeks or months at a time for maintenance. In the winter of 2010 - 2011, the Corps eliminated navigation for fifteen weeks to accommodate navigation lock work on Snake and Columbia dams. Through its actions, the Corps has rightly acknowledged that Congressional authorization to maintain a specified channel depth in the Snake is not an ironclad mandate but instead allows the Corps discretion to maintain bigger-picture, authorized uses through departures from what it sees as its mandate. The same authorization allows the Corps to consider other alternatives to a fourteen-foot channel depth.

Nor is the Corps' narrow view of the Flood Control Act of 1962 relevant for purposes of NEPA. In *NWF v. NMFS*, 235 F.Supp.2d 1143, 1156 & n.7 (W.D. Wash. 2002), the Court "expresse[d] no opinion regarding whether the Corps is authorized to maintain the navigation channel at a depth of less than fourteen feet," but held that "[e]ven if the Corps were not presently empowered to maintain the channel at a depth of less than fourteen feet, it would not be permitted to disregard a reasonable alternative" that may alter the depth of the channel or even shut it down for some parts of the year. That is, even if a fourteen-foot channel depth were required – though clearly it is not – the Corps may not blindly adopt that depth requirement without considering other alternatives.

Yet despite the wide discretion afforded in these statutes and the case law, the Corps defines the purpose and need for the proposed action by saying that "immediate action is needed to reestablish the navigation channel to its authorized dimensions", i.e. fourteen feet. DEIS at 1-4. The Corps' purpose and need, while acknowledging other purposes generally, is far too

narrowly-defined, focused in the near term only on deepening the channel. Under this purpose and need, dredging is a foregone conclusion.

Courts have been clear, however, that "an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, [which would cause the EIS to] become a foreordained formality." *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). Where "the agency constricts the definition of the project's purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role." *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 666 (10th Cir. 1997). *See also Forelaws on Board v. Johnson*, 743 F.2d 677, 683 (9th Cir.1985) ("NEPA's legislative history reflects Congress's concern that agencies might attempt to avoid any compliance with NEPA by narrowly construing other statutory directives to create a conflict with NEPA.").

As noted above, Congressional authorization to maintain a navigation channel to a certain depth is not to be confused with a requirement that the Corps do so. In fact, as the Corps is well aware, it is under multiple legal obligations to manage the river in certain ways, some of which may conflict with one another at any given time. The purpose and need for this DEIS should be focused more broadly on transportation of products from Lewiston downstream. Barge navigation is not an end in itself, but rather a means of shipping various products, primarily grain exports, to and from Lewiston. There are multiple different ways to transport products that don't require the full navigation channel, or even any barge navigation at all, and that would also retain and enhance the non-barging economic benefits provided by port facilities. This DEIS should evaluate the relative merits, costs, and environmental risks presented by different transportation regimes, including barge navigation, so that Congress and the public can have a complete picture of the situation.

III. THE CORPS DOES NOT CONSIDER ALL REASONABLE ALTERNATIVES.

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. § 101(2)(C)(iii). The discussion of alternatives is at "the heart" of the NEPA process. 40 C.F.R. §1502.14. The CEQ regulations require the agency to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14(a). All federal agencies shall, to the fullest extent possible, "[s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4322(2)(E); *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992). A federal agency must look at every reasonable alternative within the "nature and scope of the proposed action," *California v. Bloc*k, 690 F.2d 753, 761 (9th Cir. 1982), "sufficient to permit a reasoned choice," *Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810, 815 (9th Cir. 1987), rev'd on other grounds sub nom. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989), and cannot limit its consideration to only those alternatives that it believes it has the current authority to implement, *NRDC v. Morton*, 458 F.2d 872 (D.C. Cir. 1972). The failure to consider all reasonable alternatives is fatal to the adequacy of an agency's NEPA analysis. *Idaho Conservation League*, 956 F.2d at 1519 ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.").

By presenting a range of alternatives far too narrow to serve NEPA's goals, the Corps has failed even to pay lip service to these fundamental requirements of NEPA. Owing to its improperly narrow purpose and need statement, the Corps has nominally presented seven alternatives, which consist of five alternatives and two combinations.[4] The "alternatives," are hardly stand-alone options that would amount to any marked difference in strategy or provide the basis for comparative discussion. The first two alternatives are dismissed essentially out of hand, and the remaining three alternatives are aggregated to form the preferred alternative. Each, including the "no action" alternative is measured against the Corps' erroneous criterion of creating a 14-foot channel, and the Corps has provided no discussion of true alternatives to that strategy. Setting the purpose and need as "maintaining a 14-foot channel" may be accurately restated as "dredging a 14-foot channel" since according to the Corps, there is no other way – at least in the short-term – to maintain such a channel in the immediate way the Corps envisions; an alternative that includes dredging is a therefore a preordained conclusion. The Corps' improperly narrow purpose and need statement also underlies its rejection of several reasonable alternatives without sufficient explanation.

A. The Corps' "No Action Alternative" is Not a True No Action Alternative and Did Not Receive Adequate Consideration.

NEPA requires that the EIS contain a "no action" alternative. 40 C.F.R.§1502.14. The no action alternative must be "considered in detail," *Alaska Wilderness Recreation and Tourism Ass'n v. Morrison, 67 F.3d 723* (9th Cir. 1995) (citing *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988)), and it "serves as the benchmark by which the effects of all action alternatives are measured." *Id.* at 730. CEQ guidelines explain both the import and the necessity of the "no action" alternative.

> [T]he regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. . . . Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by NEPA.

46 Fed. Reg. 18,026 (March 16, 1981) ("Forty Most Asked Questions Concerning CEQ Guidelines to NEPA Regulations"), *available at* http://ceq.hss.doe.gov/nepa/regs/40/1-10.HTM#3 (accessed March 20, 2013)("Forty Questions"). That is, the Corps should provide a true no action alternative regardless of what it perceives to be its obligations.

The Corps has defined the no action alternative, Alternative 1, as "no change in current practices." DEIS at 2-22. It describes this alternative as "represent[ing] a continuation of the Corps' current operational practices of managing the LSRP through navigation objective reservoir operations in the lower Snake." *Id*. Under this alternative, the Corps would address

[4] The preferred alternative, Alternative 7, consists of Alternatives 3, 4, 5, and 6. Alternative 6 is a combination of Alternatives 3 and 4.

navigation through operating reservoirs as close to MOP as possible at some times of the year and eventually up to "maximum operating pool," which it concludes would not address future needs as further sediment accumulates and limits the amount the water level can be raised . *Id.* at 2-24.[5]

The Corps' "no action" alternative suffers from two major problems. The first is that rather than "no action" it involves substantial action and cannot form the proper baseline for evaluating the PSMP. The second problem is that while it is not a "no action" alternative, Alternative 1 still deserves – but did not receive – full consideration as an alternative to dredging.

1. Alternative 1 is not a true no- action alternative.

The Corps' erroneous conclusion that it must provide a 14-foot navigation channel permeates even its "no action" alternative. Rather than providing a true alternative of no action, the Corps has simply hypothesized a means to achieving a 14-foot navigation channel using different actions than its other alternatives. This is an action alternative, not a no action alternative.[6]

What constitutes an appropriate "no action alternative" depends on the nature of the action under consideration. CEQ Forty Questions. If the action is a decision on a proposal for a project, "'no action' . . . would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward." *Id.*; *see also Or. Natural Res. Council v. U.S. Forest Serv.*, 445 F. Supp. 2d 1211, 1225 (D. Or. 2006) (finding that the Forest Service did not consider true no action alternative when it failed to consider abandoning timber sales, even though timber contracts were in place); *Western Watersheds Project v. Rosencrance*, Case No. 4:09cv298 (D. Id. 2011) (when deciding whether to renew livestock grazing permits, BLM must consider denial of the permit, and no subsequent grazing, as the no action alternative). But where "ongoing programs initiated under existing legislation and regulations will continue," it may be appropriate to consider a no action alternative of continuing existing management. CEQ Forty Questions.

Here, as in *Oregon Natural Resource Council*, there is no "ongoing program" to provide a 14-foot navigation channel. While the Corps is authorized to provide efficient transportation of goods in and out of the region insofar as it is consistent with the other purposes of the Snake River projects, barging through a 14-foot channel is only one piece among many in that puzzle. Likewise, as discussed above, the Corps' obligations in the Lower Snake River include much more than maintaining its vision of navigation, such as power generation and preservation of fish

[5] The Corps' description of this operation is itself a fiction. Under the terms of the Biological Opinion for the Federal Columbia River Power System, the Corps is prohibited from raising MOP as the Corps envisions to continue to provide for year-round navigation.

[6] Indeed, this alternative shares many of the same measures and features of the "action" alternatives – including the preferred Alternative 7 – discussed in the DEIS. A no action alternative cannot mirror the actions contained in the preferred alternative.

and wildlife. *See supra* Section II. The Corps has no obligation to maintain a 14-foot navigation channel. *Id.* Indeed a federal district court confirmed that the Corps has historically addressed sediment by dredging on an as-needed basis, rather than through an ongoing program. *NWF v. NMFS*, C02-2259L, Order Granting Preliminary Injunction (filed Nov. 1, 2004); *see also* DEIS at 1-9 to 1-10.[7] There was no programmatic sediment management plan in place for the Lower Snake River prior to 2002, and the Record of Decision for the Dredged Material Management Plan was withdrawn in 2005. Since 2005, there has been no overall management plan for the lower Snake River in place. DEIS at 1-2. Although the Corps dredged three areas in the winter 2005-2006, this was a one-time action. DEIS at 1-11.

Thus, a true no action alternative would not have as its goal the maintenance of a 14-foot channel and would not involve navigation oriented reservoir management. Under such a plan, there would be no programmatic sediment management plan, and sediment would continue to accumulate in the river with the Corps doing nothing beyond necessary dam maintenance. This sort of true no action alternative would allow an examination of the consequences of not maintaining the channel at a 14-foot depth against the action alternatives provided by the Corps. That no action alternative would form the NEPA-required baseline to measure its effects on navigation – in addition to the Corps' other competing responsibilities in the Lower Snake river – against the action alternatives provided by the Corps.[8]

2. Inadequate evaluation of the Corps' "no action alternative"

The second major flaw in the Corps' presentation of its "no action alternative" is that it fails to provide a rigorous analysis of that alternative. Again, while the Corps' "no action alternative" is not a true no action plan, it still qualifies as an alternative that must be evaluated fully. The Corps, however, has provided nothing but the most surface-level evaluation of its "no action alternative." Rather than considering that plan in the context of the many and varied interests the Corps must consider in the Lower Snake River, the Corps dismisses Alternative 1 out of hand because it may eventually result in less than a 14-foot navigation channel. When that would occur is not specified.

The Corps should have considered light-loading and other alternatives that would render Alternative 1 a workable solution (within the MOP constraints imposed by the FCRPS BiOp) and that might obviate the perceived need to maintain a 14-foot channel in perpetuity. The Corps' responsibility on the Lower Snake River is not to provide a 14-foot channel for the sake of a 14-foot channel but only to do so if it is justified under the various economic and statutory considerations the Corps must consider. Failing to give due consideration to Alternative 1 is further evidence the Corps has neglected that responsibility; the Corps doomed this alternative when it formulated its narrow and mistaken purpose and need.

---

[7] As explained above, neither the governing statutes nor the regulations require the Corps to manage sediment to maintain a 14-foot navigation channel during all months of the year, so there is similarly no "ongoing program" to provide a year-round 14-foot navigation channel.

[8] As noted below and addressed more fully in the attached comments prepared by Natural Resource Economics, a true no action alternative is vital for the Corps to understand and present an accurate and balanced discussion of the benefits and costs of its alternatives and proposals.

B. The Corps Failed to Consider A Range of Reasonable Alternatives.

The Corps' cursory analysis of its non-dredging alternatives – along with entirely failing to consider other viable options – is a new application of the familiar law of the instrument fallacy: when you have a clamshell bucket, every problem looks like it should be dredged. An agency must consider all reasonable alternatives to a proposed action. 42 U.S.C. § 4332(2)(C)(iii); *Alaska Wilderness Recreation v. Morrison*, 67 F.3d 723, 729 (9th Cir.1995). What constitutes a "reasonable" alternative depends on the nature of the proposal. CEQ's Forty Questions. Generally speaking, "[t]he stated goal of a project necessarily dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms." *See City of Carmel-By-The-Sea v. United States Dep't of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997) (citing *Citizens Against Burlington*, 938 F.2d at 196). Of course, the agency cannot narrow the purpose and need in order to limit the choice among alternatives. *See supra* Section II.

Where an agency identifies an alternative but drops it from further analysis, the agency must offer a sufficient and reasonable explanation for doing so. 40 C.F.R. § 1502.14(a); *N. Alaska Envtl. Center v. Kempthorne*, 457 F.3d 969, 978-79 (9th Cir. 2006). The elimination of a reasonable alternative from detailed consideration on a basis that is legally incorrect is, of course, insufficient and unreasonable.

Here, the Corps identified and then rejected without detailed consideration four reasonable alternatives based on the assumption that it must maintain a 14-foot navigation channel year round: navigation-oriented reservoir management (Alternative 1), the implementation of system management measures only (Alternative 3), the implementation of structural management measures only (Alternative 4), and a combination of system management and structural management (Alternative 6). DEIS at 2-25 to2-28, 2-30. The Corps entirely failed to consider alternatives or a combination of alternatives that would involve maintaining the navigation channel at less than 14 feet.

The Corps briefly identified and then summarily dismissed a "system management" measure to maintain channel depth at less than 14 feet. *See* DEIS at 2-5, 2-8. This measure should have been analyzed. It would have overlapped with the true no action alternative the Corps should have considered. Even if it were not the true no action alternative, however, managing the river for a different channel depth would still be a reasonable alternative in its own right inasmuch as it could meet the various obligations of the Corps in the Lower Snake River system. Managing the river for channel depth of less than 14 feet, or for 14 feet only during certain months of the year, is a reasonable alternative under the broader purpose and need that the Corps should have used in preparing NEPA analysis for a sediment management plan. The Corps' proposed action is to adopt a plan that manages sediment that interferes with the authorized purposes of the LSRP. DEIS at 1-2. "The authorized purposes of the LSRP include commercial navigation, hydroelectric power generation, recreation, and fish and wildlife conservation." *Id.* at 1-4.

A channel depth of less than 14 feet is consistent with both the production of hydro-electric power and wildlife conservation. Nor would a change in channel depth preclude

navigation on the lower Snake River. As the DEIS itself acknowledges, "[m]aintaining the federal navigation channel at a less than 14-foot depth could be accomplished through establishing another depth as a minimum (such as 12 foot, 10 foot, etc.), or maintaining the 14-foot channel on a periodic basis . . ." DEIS at 2-5. In the former case, shippers could still use the river by "adjust[ing] their vessels and/or shipping practices to accommodate the new paradigm." *Id.*

Despite the fact that adjusting channel depth is consistent with the broader purpose and need, the Corps summarily rejected this alternative – giving it a total of two sentences of analysis – on the grounds that it did not meet the purpose and need of the management plan: "The Congressionally-authorized channel depth is 14 feet." *Id.* at 2-8. Even if the Corps were correct in its reading of the Flood Control Act of 1962 (and it is not, for the reasons discussed above), it cannot reject an alternative merely because it lacks current authority to implement it. *NWF v. NMFS*, 235 F.Supp.2d at 1154-1155. In rejecting this management measure for consideration among the alternatives, the Corps also foreclosed consideration of the feasibility and comparative advantages of light-loading barges. As a result, the Corps has provided no discussion of true alternatives to maintaining a 14-foot channel that might have allowed the public to evaluate the Corps' vision for barging in the larger context of the movement of goods and other goals

The Corps relied on the same rationale as a basis for elimination of Alternative 3 from detailed consideration. Implementation of Alternative 3 would have addressed sediment problems by raising and lowering the level of the reservoir, adjusting flows to draw sediment downstream, and modifying or moving existing facilities affected by the sediment. *Id.* at 2-25 to 2-26. The Corps found that such system management measures would partially address long-term sedimentation problems and flood risk. *Id*. at 2-33. Alternative 3 was thus consistent with the purpose and need of developing a sediment management plan, the proposed action, because it would have had the potential to "manage, reduce and . . . sediment accumulation in areas of the lower Snake River reservoirs that interfere with federally authorized purposes." DEIS at 1-3. Nevertheless, the Corps eliminated Alternative 3 on the grounds that "[f]urther system management measures would not reestablish the navigation channel." *Id.* at 2-24. This again illustrates the unduly narrow scope of the purpose and need defined by the Corps.

Likewise, the Corps relied on its erroneously narrow definition of the purpose and need in eliminating Alternatives 4 and 6 from detailed consideration. Alternative 4 would have authorized the construction of structures such as bendway weirs and dikes, as well as activities like agitation to suspend sediment at existing structures. *Id.* at 2-27. Alternative 6 is a combination of Alternatives 3 and 4. *Id.* at 2-30 to 2-31. Neither of these alternatives received due consideration because they would not fulfill the Corps' incorrect 14-foot channel purpose and need.

As a result of eliminating the alternatives that would not provide for an immediate 14-foot channel, the Corps ultimately considered only two alternatives in detail: Dredging Based Management (Alternative 5) and "Comprehensive" (Alternative 7). While there is no minimum number of alternatives that must be discussed in an EIS, the agency must consider a range of alternatives sufficient to "foster[] informed decision-making and informed public participation."

California v. Block, 690 F.2d 753 (9th Cir. 1982). Having only two real alternatives, both involving the same primary action – dredging – and with a goal to "initiate action to reestablish the authorized dimensions of the navigation channel," DEIS at 2-22, the DEIS does not fulfill this purpose.

As explained more fully in comments from the Nez Perce Tribe (which we adopt and incorporate here by reference), Alternative 7, the Corps' chosen alternative, amounts to a "we'll tell you later" approach; it is not a real action alternative. It contains no real plan but is just a limited menu of options the Corps may consider at some unspecified point after dredging, or perhaps after dredging another time, or another. There is no limiting principle to Alternative 7; it is essentially a license to take whatever actions on the list the Corps chooses, whenever it chooses, without actually selecting which options would be better than others or describing what standards the Corps will apply when choosing among these options. And as the Corps has demonstrated repeatedly, dredging will always be its default choice. Without establishing a hierarchy of measures and any standards or benchmarks for those measures, the Corps cannot evaluate the environmental or socioeconomic impacts of this Alternative.

The purpose of analyzing alternatives to a proposed action is to "identify and assess the reasonable alternatives to the proposed action that will avoid or minimize adverse effects of these actions upon the human environment." 40 C.F.R. § 1500.2(e). The Corps' failure to give detailed consideration to any alternative that does not rely on dredging is fatal to the legality of its NEPA analysis. *See Or. Natural Desert Ass'n v. BLM*, 531 F.3d 1114, 1145 (9th Cir. 2008) (holding that BLM violated NEPA's alternatives requirement because, "[i]t considered no alternative that proposed closing more than a fraction of the planning area to ORV use"); *Or. Natural Desert Ass'n v. Singleton*, 47 F. Supp. 2d 1182, 1194 (D. Or. 1998) (holding that BLM unreasonably failed to consider "an alternative which simply eliminates cattle grazing, without compromising the rivers' scenic, geologic, wildlife and cultural values" in preparing a management plan for Owyhee Rivers designated as Wild and Scenic). The DEIS does not accomplish any of these goals. By looking only narrowly at a set of alternatives designed to achieve a narrow predetermined outcome, the DEIS fails to satisfy NEPA's requirement that it take a "hard look" at alternatives to its proposed action.

IV. THE CORPS HAS UNLAWFULLY PREDETERMINED THE OUTCOME OF THE NEPA PROCESS.

The requirement that an agency must look before it leaps is a bedrock principle of the NEPA process. *Save the Yak Comm. v. Block*, 840 F.2d 714, 718 (9th Cir. 1988). An agency may not decide to proceed with a proposed action until after it has considered the action's potential environmental impacts. The CEQ regulations require federal agencies to begin preparing NEPA documents as early as possible in the decision-making process "so that preparation can be *completed* in time for the final statement to be included in any recommendation or report on the proposal." 40 C.F.R. 1508.25 (emphasis added). An EIS "shall be prepared early enough so that it can serve practically as an important contribution to the decision-making process and will not be used to rationalize or justify decisions already made." *Id.* This is important because, "[a]fter major investment of both time and money, it is likely that more environmental harm will be tolerated" than would otherwise be acceptable if the agency

had considered that harm before it acted. *Confederated Tribes and Bands of the Yakima Indian Nation v. FERC*, 746 F.2d 466, 471-72 (9th Cir.1984).

The Corps has violated these key principles by deciding to adopt a sediment management plan, and specific contents of that plan, before completing the NEPA process. The DEIS "provides a menu of potential measures that may be applicable for sediment accumulation issues." DEIS at 1. These options include dredging and dredged materials management. *Id.* at 13. Although it has not officially adopted Alternative 7 or the draft plan in Appendix A, the Corps is seeking a permit to authorize maintenance dredging activities at three locations in the Lower Granite Reservoir and at Ice Harbor Dam under Section 404 of the Clean Water Act. Specifically, on March 11, 2013, the Corps issued a press release inviting public comments on the proposed Clean Water Act Permit.[9] While members of the public are diligently preparing comments on the DEIS in order to provide the Corps with full information, the Corps is proceeding with other actions as if it had already adopted Alternative 7 and the draft plan included in Appendix A in a Record of Decision.

The Corps' pursuit of a Clean Water Act permit tiered to an as-yet unfinished NEPA process demonstrates that the Corps has predetermined the result of this NEPA process. This defeats the purposes of NEPA and is unacceptable. The Corps should abandon its intent to undertake any activities tiered to the PSMP or its EIS until *after* the NEPA process has been completed. In addition, unless the Corps makes substantial changes to the EIS and/or the PSMP in response to public comments, it can be presumed that the final EIS and PSMP will be predetermined results that do not satisfy NEPA.

V. THE DEIS FAILS TO ADEQUATELY EVALUATE THE ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES IT DOES PRESENT.

A. The DEIS Fails to Adequately Consider Effects to ESA-Listed Salmon and Steelhead.

There are two categories of direct effects that dredging or other in-water construction actions will have on threatened and endangered salmon and steelhead in the Snake River. The Corps' discussion of both effects raises more questions than it answers. First, dredging will affect any fish in the river at the time through potential entrainment in dredge equipment, turbidity, noise, and other water quality impacts. The Corps repeatedly dismisses these impacts as unlikely or minimal because in-water work would occur during the "work windows" when "the fewest ESA-listed fish are found in the reservoir[s]." DIES at 4-5. But as the Corps acknowledges, some Snake River Fall chinook overwinter in the reservoirs and steelhead may also be present during these work windows. The DEIS does not discuss whether or how the work windows will minimize impacts to these fish, does not consider impacts that will not be

[9] *See* http://www.nww.usace.army.mil/Portals/28/docs/programsandprojects/psmp/Pubnotice-2013-14drdg.pdf (accessed March 20, 2013). Although the Corps seeks to rely on the DEIS for the NEPA review required for the 2013-2014 dredging, the dredged quantity identified in it Public Notice exceeds the amount discussed in the DEIS by 69,368 cubic yards.

avoided, and does not present or discuss any additional mitigation to address the impacts to fish that are there during the work window months. The DEIS cites several studies about Fall chinook that overwinter but does not attempt to quantify the number or percentage of overwintering fish or how affecting overwintering fish would affect the overall population. DEIS at 3-11 to 3-13, 4-5.

Second, dredging impacts salmonid habitat. The entire lower Snake River is designated critical habitat for Snake River Fall chinook salmon spawning, rearing and migration. The Corps notes that Snake River Fall chinook do spawn in the tailrace areas downstream of the four dams and that its most recent survey data (from 2006-2009) identified a number of Fall chinook redds in the tailrace portions of all four Lower Snake River dams. *Id.* at 3-10 to 3-11. The Corps also notes that the lock approaches in the downstream tailraces of these dams contain suitable habitat for spawning, but emphasizes that redds have not been detected in these areas recently. *Id.* at 4-5. Many of these lock approaches will be dredged under the dredging alternatives. *See id*. at 1-8 to 1-9 (each of the lock approaches listed as a "problem area"). Based on this data, the Corps appears to believe that dredging will not harm salmon spawning habitat. This conclusion is speculative and is based, at best, on outdated information. As the Corps and other federal agencies have touted in several other forums over the past three years, Snake River Fall chinook returns have, on average, increased in the past five years. Redd surveys last completed when these returns were up to 50% lower do not constitute complete or accurate information about what habitat is important for Fall chinook spawning now or in the future.

B. <u>The Benefits Predicted from "Habitat Improvement" Resulting from In-Reservoir Deposition of Dredge Spoils are not Justified.</u>

The DEIS assumes that in-river disposal will create effective "habitat" for salmon and other species. While we would support valid salmon habitat restoration measures, we are concerned that the benefits of in-river disposal are overstated and the risks have been ignored. We are primarily concerned that in-river disposal is being pursued primarily for economic, not environmental, reasons. To the extent the Corps contends that this use of dredge spoils is beneficial, it must consider the value of this habitat over the life of the PSMP and whether it will benefit specific runs of threatened and endangered salmon and steelhead.[10] Even now, water temperatures in the Snake River during the months of July-September routinely exceed 70 degrees, which not only harms salmonids and other cold-water fish, but also violates Washington's water quality standards. While a large portion of this increase is caused and exacerbated by the increased surface area of the reservoirs and slow-moving water behind the dams, these temperatures exceedences are projected to increase in both severity and duration over the next 20 years due to the effects of climate change. As temperatures increase, the temperature exceedences in the Snake River – particularly in shallow-water areas – will become longer and more severe. The Corps' creation of shallow-water habitat (even if successful structurally) may provide no benefit if summer rearing fall chinook using shallow water habitat are forced by higher temperatures to move downstream to the cooler Columbia mainstem. The Corps' projections of benefits from its placement of dredge spoils does not account for this or

[10] As the Nez Perce Tribe explains, for example, the Corps must consider whether its projected benefits extend to significant portion of fall chinook that rear in the Clearwater River.

any other risks. Before the Corps embarks upon such a risky and expensive project, more evaluation on the risks and benefits should be provided.

C. Mobilization of Toxics into the Water Column.

The DEIS largely dismisses the potential for dredging to stir up toxic wastes contained in sediments. DEIS at 3-54 (one-paragraph summary of several sediment samples). We believe that the risks presented could be far greater than those acknowledged by the DEIS. Previous data has shown sediment samples contaminated with dioxin and petroleum products, substances that will be activated in the river during dredging. Industrial facilities like the Clearwater Paper facility continue to pour out dioxin and many other toxics into this area. Other than the most general description, there is no information in the DEIS on the sampling sites or whether any targeted sediment sampling has been done in the river. The Corps should provide much more detailed information, including the results of recent comprehensive sampling and core tests throughout the areas to be dredged. Moreover, the Corps should provide more detailed information on how it intends to monitor the dredging to ensure that toxics "hot spots" do not cause habitat degradation. Forthrightly addressing the toxics issue is particularly important where sediments will be used to attempt to create shallow water habitat for salmonids.

D. The DEIS Fails to Evaluate Fully the Impacts of its Preferred Alternative.

Although the DEIS contains some – albeit limited and inadequate – information about some of the impacts of dredging, it contains little to no analysis of the impacts of other features of Alternative 7. For example, though it includes raising the levees in Lewiston in its menu of options under Alternative 7, the Corps does not analyze the social, economic, and environmental costs of raising the levees, but rather treats this measure as a hypothetical that may become necessary in the future. *See* DEIS at 2-18. Other than noting that construction associated with raising the levees may cause "short-term" recreation or socioeconomics effects, the Corps ignores the impacts of this measure.

The levee that protects downtown Lewiston from flooding originally had 5 feet of freeboard. Much of that freeboard is now gone. In 2001, because of sediment accumulation, the Corps proposed raising the levee by 3 feet to decrease the risk of flooding downtown Lewiston. In the absence of any information that this measure is "off the table" (combined with the Corps' failure to consider climate change and other risk factors – *see infra*), raising Lewiston's levees seems inevitable – at least insofar as the Corps has presented no plan that would alleviate that need. [11]

The Corps is no doubt aware that raising the levees is a controversial measure that would adversely affect Lewiston by, among other things, further separating the community from the

[11] The Corps' failure to analyze the impacts of this measure also undermines its consideration of cumulative effects. Regardless of whether this measure is necessary for the Corps' impermissibly narrow focus on maintaining the navigation channel, it is at least reasonably foreseeable that additional sediment accumulation in the Lower Granite reservoir outside the navigation channel will continue over the course of the PSMP and require the Corps to address how to protect Lewiston from flood risk.

river and by requiring major changes to existing infrastructure. It will also be expensive and by itself should compel the Corps to look at other remedies for the flood risk to Lewiston. The Corps' wish to avoid addressing such a costly, unpopular, but integrally connected, issue in the DEIS does not allow the agency to sweep it under the rug. To the contrary, NEPA requires a full examination of all of the impacts of the action and any cumulative effects. By selectively discussing only some of the aspects of the action, the Corps has blinded both itself and the public to the full effects of its preferred course of action.

E. The DEIS fails to Consider Climate Change Impacts.

The Corps fails to consider the extent to which continued operation of the navigation channel contributes to climate change. Climate change must be considered among the direct or indirect impacts of an action. *See Mid States Coal. for Progress v. Surface Transportation Board,* 345 F.3d 520 (8th Cir. 2003) (EIS that failed to consider the climate change impacts of the coal planned for transport on the proposed rail line being analyzed in the EIS was inadequate); *Border Power Plant Working Group v. Dep't of Energy,* 260 F. Supp. 2d 997 (S.D. Cal. 2003) (EA for new electricity transmission line was inadequate because it failed to consider the impacts to climate change from power plants). An indirect impact is one that is "caused by the action and later in time or farther removed in distance, but still reasonably foreseeable." 40 C.F.R. § 1508.8(b).

The continued use of the Lower Snake River navigation channel contemplated in DEIS will result in the emission of greater greenhouse gases. As identified in the attached comments from Natural Resource Economics, the current barge system results in higher carbon dioxide emissions – at least 1,259 million tons higher – than shipping by rail. *See* Attachment A at 19 (Natural Resource Economics comments discussing reports showing reductions in CO2 from McCoy facility alone due to efficiencies and a reduction in the number of truck miles travelled to rail line grain facilities versus the river navigation system). Less reliance on trucking to the river and barging would result in a measurable net reduction in energy consumption and air pollution, but these effects are not captured anywhere in the Corps' analysis.[12]

Moreover, climate change compounds the harm to salmon caused by the operation of the Lower Snake River dams, including for navigation. In a rapidly warming world, access to cold-water refugia, such as that in central Idaho and eastern Oregon, is vital for resilience and for survival and recovery of salmon and steelhead. These cold-water refugia in central Idaho and Oregon support the highest and longest migrating salmon group on earth, a unique feature cited by scientists as vital to maintain given its adaptive value during climate change.[13] There is

[12] "[T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control ... does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Rather, "[t]he impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Id.*

[13] *See, e.g.*, J.T. Martin, *Climate and development: Salmon Caught in the Squeeze. Response to 2007 Draft Biological Opinion on the Federal Columbia River Power System and Mainstem Effects of the Upper Snake and Other Tributary Actions* (2007); L. Crozier, R. Zabel, and A.

widespread scientific agreement that the current configuration and operation of the Snake River dams – that the Corps seeks to perpetuate through the PSMP – precludes these fish from reaching and fully utilizing that habitat. While the Corps recognizes that the current system of slackwater lakes does result in higher and longer lasting water temperatures in the summer, DEIS at 4-60, it fails to analyze its decision to continue maintaining a navigation system (for the term of the PSMP or beyond) that perpetuates this exceedence, nor does it recognize or consider that increasing temperatures from climate change will make this current problem worse. *See, e.g.*, *id.* at 4-66 (finding that Alternative 7 would not change current conditions and so will not contribute to cumulative effects to these species).[14] In choosing to maintain this waterway, the Corps is making a decision to perpetuate these impacts and must fully consider them in its EIS.

VI. THE DEIS FAILS TO IDENTIFY AND ADEQUATELY ANALYZE CUMULATIVE IMPACTS.

NEPA requires a cumulative impacts analysis to: (1) catalogue past projects in the area; (2) assess the cumulative environmental impacts of those projects with the proposed project; and (3) analyze the additive cumulative impact of all reasonably foreseeable Federal and non-Federal actions, whether or not they have actually been proposed. *See City of Carmel-By-The-Sea v. United States Dep't of Transp*., 123 F.3d 1142, 1160 (9th Cir. 1997) (rejecting cumulative impacts analysis that referred generally to other past "development projects" and did not discuss the additive impacts of foreseeable future projects); *Fritiofson v. Alexander*, 772 F.2d 1225, 1243 (5th Cir. 1985) (agency must consider reasonably foreseeable actions regardless of whether they have yet formally been proposed). Furthermore, NEPA requires that a cumulative impacts analysis provide "some quantified or detailed information" because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." *Cuddy Mountain*, 137 F.3d at 1379; *Carmel-By-The-Sea*, 123 F.3d at 1160 (faulting EIS for describing other projects in inadequate detail to permit review of their cumulative impacts). The DEIS does not contain an analysis of cumulative effects that meets these requirements.

Hamlet, *Predicting Differential Effects of Climate Change at the Population Level with Life-cycle Models of Spring Chinook Salmon* (2008); Global Change Biology 14: 236-249 at 247 (study by NOAA Fisheries scientists and others concluding that because "[g]lobal warming will likely reduce potential habitat at lower elevations in the Pacific Northwest," preserving high-elevation populations in the Snake basin is a "top conservation priority.")

[14] For example, according to Goniea, et al. (2006), "[t]he impoundment of the lower Columbia and Snake rivers [behind] a series of hydroelectric projects and the resulting flow manipulations have correlated with a trend of warmer water temperatures within the system. Over the last several decades, the main stem has steadily warmed earlier in the spring and cooled later in the fall. Warming due to impoundment and water diversion has been exacerbated by regional climate change." Goniea, T.M., et al., *Behavioral Thermoregulation and Slowed Migration by Adult Fall Chinook in Response to High Columbia River Water Temperatures*, 135 Transactions of the American Fisheries Society 408, 408-19 (2008).

1. The DEIS does not identify other reasonably foreseeable actions.

First, rather than identifying and cataloguing the full suite of projects and impacts in the affected area (both past and present), the Corps cryptically states that, with the exception of Alternative 3, it will only consider activities that the Corps itself has or will undertake in its cumulative impact analysis. DEIS at 4-55. But the Corps' duty is to evaluate cumulative effects – including reasonably foreseeable effects – from all entities in the action area. Although the Corps assumes that the alternatives will not have cumulative effects with other projects in the action area, the DEIS does not contain information about any other projects that would allow the Corps to draw this conclusion. There is no discussion of impacts from, for example, timber sales or other activities planned in the watershed, other maintenance dredging at the Mouth of the Columbia or in the Lower Columbia River, impacts from the port of Lewiston's dock expansion and related dredging, or the future impacts of FCRPS management on salmon and steelhead. There are likely far more than just these actions that are reasonably foreseeable over the course of the PSMP, but the point is that none are even catalogued, let alone analyzed in the Corps' cumulative effects discussion.

2. The cumulative effects analysis does not account for a changing baseline from climate change.

The DEIS fails to incorporate climate change into its cumulative impacts analysis, either as part of its catalog of past projects and events, or as a reasonably foreseeable future impact. In fact, the only reference to "climate change" in the "Cumulative Effects" section of the DEIS uses climate change as an excuse to avoid estimating or providing a qualitative description of the amount of sediment entering the river from upland sources. *See* DEIS at 4-67 ("Conditions related to climate change could change sediment loading and transport dynamics in the cumulative effects study area. Therefore, Alternative 7 would not have a cumulative effect on hydrology and sediment."). This statement misses the point entirely.

It is a fact that increasing temperatures in the Snake River watershed will likely bring an increase in forest fires and an increase in the amount of sediment that reaches the river. *See, e.g.*, DEIS at 1-16 (fires are responsible for the largest amounts of sediment in this basin). The frequency and severity of these fires has increased over the past 40 years, *see id.* at 1-21 to 1-23, and is expected to increase as the climate continues to warm. *Id.* at 1-25. The DEIS cites a recent study looking at the likely impacts of climate change on sediment loads in central Idaho. DEIS, App'x D (*Enhanced Sediment Delivery in a Changing Climate in Semi-arid Mountain Basins: Implications for Water Resource Management and Aquatic Habitat in the Northern Rocky Mountains*). A quote from this study is particularly applicable here.

> Climate-modulated interactions among vegetation, wildfire, and hydrology suggest that sediment yields will likely increase in response to climate change. Within central Idaho recent climate-driven increases in wildfire burn severity and extent have the potential to produce sediment yields roughly 10-times greater than those observed during the 20th century. …these elevated sediment yields are probably outside of the range of expectations for downstream reservoirs, which may have consequences for reservoir management and life expectancy.

It is at least reasonably foreseeable – and indeed, likely – that the sediment accumulation the Corps is attempting to address in the DEIS will increase and will require additional measures and additional costs over time.[15] None of these increases, however, are factored into the Corps' consideration of the environmental impacts from increased needs for channel maintenance over time and are not considered in any analysis of the benefits and costs of the PSMP. The Corps is not permitted to ignore the changing on-the-ground reality of its action over the term of the DEIS. By doing so, the Corps not only ignores a host of cumulative environmental impacts, but also fails to account for changes that will alter the economics of continuing to maintain a 14-foot navigation channel.

VII. THE DEIS PRESENTS INCONSISTENT AND INACCURATE INFORMATION.

Agencies are required to ensure the professional integrity of all discussions and analyses in an EIS, including economic analyses. 40 C.F.R. § 1502.24. The DEIS does not do so.

A. The DEIS Presents Contradictory and Inaccurate Information About Sediment Volumes.

Due to the Corps' erroneous and unspecific sediment deposition estimates, it is impossible to understand the environmental and economic costs of dredging. Based on dredging history, the area requiring 95% of past dredging in the Lower Granite Reservoir is generally referred to as the confluence of the Snake and Clearwater Rivers, or from the Port of Lewiston at RM 2.0 on the Clearwater to RM 137.69 just below the Port of Clarkston. The volume of sediment that accumulates in this area is the key element in any sediment management plan.

According to the DEIS, an estimated average 2.2 million cubic yards (mcy) of sediment arrives at the confluence of the Snake and Clearwater Rivers annually. This figure is based upon the Corps' estimate that about 80 mcy of sediment has accumulated in the Lower Granite Reservoir between 1974 and 2010, or the previous 36 years. DEIS App'x A at 19. A small portion (estimated at .2 mcy) is transported over Lower Granite (fine sand and silt). The rest gets deposited in the upper reservoir, mostly around the confluence, with much of this deposit later moving down stream to deeper water.

[15] Even apart form the increase in sediment predicted from the effects of climate change, the Corps' sediment projections do not account for increases in sediment from other events. For example, the SWAT model the Corps relies on in Appendix F does not appear to account for mass wasting events that contribute massive amounts of sediment to river systems in one-time pulses. Nor does the Corps present the most recent information. *See, e.g.,* App. F at 163 (fire map does not include recent fires in the Selway-Bitterroot or Nez-Perce/Clearwater national Forests that burned over 50,000 acres in 2012). Finally, the Corps' sediment projections do not account for reasonably foreseeable increases in timber harvest of federal (or any other lands) lands. The Forest Service seeks to increase logging in National Forests over this same time period – the sediment from that logging and associated road construction will result in increased sedimentation.

The Corps, however, fails to provide any accurate information about historical sediment deposition at the confluence. Table 3.16 omits any figures for dredging in the most critical reach of the Lower Granite Reservoir – the confluence of the Snake and Clearwater Rivers, where most of the dredging occurs. Table 3.16 data includes 2.76 mcy as the amount of sediment dredged in Lower Granite Reservoir from 1974-2010. However, Table 1-3 of the DEIS and Appendix A list the total volume for all the dredging in Lower Granite reservoir as over 4.5 mcy, with about 95% of the total completed at/near the confluence.

These contradictory and confusing data infect other sections of the DEIS. In reality, sediment accumulation becomes less and less of an issue downstream from the Port of Wilma as reservoir depths increase. The DEIS needs to better evaluate sediment transport and deposition in the Clearwater River from the upper limits of the pool down to the confluence with the Snake River and in the Snake River from the upper limits of the pool downstream past the confluence with the Clearwater River and down to the Port of Wilma area. It is difficult for the Corps, let alone the public, to understand the environmental effects and the economic costs of dredging when it is unclear what volumes of sediment the Corps has dredged – and will need to dredge in the future – and from where.

B. <u>The DEIS Fails to Adequately Discuss Flood Risks to Lewiston.</u>

While Appendix F's "Flood Risk Analysis" may appear robust at first blush, its analysis lacks important considerations and downplays the flood risk to the City of Lewiston. In 26 pages of discussion, tables, and figures, the issue of climate change is never mentioned, yet climate change will likely play an important role in the future flood risk for Lewiston.

Instead, the Flood Risk Analysis looks only at past flow events for its conclusions without modeling any of the contingencies Lewiston will face in the future. For example, a major cause of large flood events on the west coast and inland is a weather event known as a "Pineapple Express." A Pineapple Express is a non-technical term for a meteorological phenomenon characterized by a strong and persistent flow of atmospheric moisture and associated with heavy precipitation from the waters adjacent to the Hawaiian Islands and extending to any location along the Pacific coast of North America.

When a Pineapple Express follows a period of colder weather and lower elevation snow accumulations, large scale flooding is often the result. While northern and central California has been the historic recipient of these events (1955, 1964, 1986 and 1997) the Willamette Valley in 1996 and the Puget Sound region from Olympia, Washington to Vancouver, BC in 2006 experienced massive flooding from Pineapple Express storm cycles. The 1997 event centered in northern California still caused significant flooding in the state of Idaho.

To understand the magnitude of these storm cycles, the 1964 flooding in northern California was described as a 600-year flood event – well below the Corps' 1,000 year System Probable Flood (SPF) determination. The Smith River, a watershed of only 719 square miles reached a peak flow of 228,000 cubic feet per second (cfs) and the Eel River with a larger watershed of 3,684 square miles exceeded 750,000 cfs. By comparison, the Clearwater River watershed covers 9,645 square miles yet the identified SPF for the Clearwater River is either 125,000 cfs or 150,000 cfs (depending on which section of Appendix F one is referencing).

Further, the total watershed of Lower Granite Reservoir is 27,140 square miles with a combined Snake & Clearwater River SPF of 420,000 cfs.

Clearly, if a strong Pineapple Express event followed a period of snow accumulation and was centered on the Clearwater and/or Snake watersheds, the potential exists for record streamflows well in excess of predicted SPF's and a significant flood threat to Lewiston. At the very least, this analysis should evaluate the possible effects of climate change and the potential for shifting storm tracks instead of simply looking at the past.

Additionally, Appendix F of the DEIS identifies significant uncertainty in its flood risk analysis even when looking at existing conditions. The DEIS lacks analysis on the possible effects of increased sediment delivery due to increased wildfire and mass wasting events that result from climate change. The impact analysis of increased sedimentation on flow conveyance, levee height & freeboard should include a benefit/cost assessment that includes information (including economic and social costs) on levee maintenance and expansion and sediment dredging for flow conveyance purposes.

The analysis should recognize that the major flood risk to Lewiston is the very existence of Lower Granite Reservoir. The ongoing accumulation of sediment, decreased channel capacity, and project operations guarantees an ongoing flood risk greatly in excess of the risk prior to the construction of Lower Granite Dam.

VIII. THE CORPS HAS FAILED TO TAKE A HARD LOOK AT THE SOCIETAL AND ECONOMIC EFFECTS OF MAINTAINING THE NAVIGATION CHANNEL.

A. NEPA Requires the Corps to Use Accurate Information and to Fully Assess the Economic and Social Impacts in the DEIS.

To satisfy NEPA's requirement to take a "hard look" at the consequences of its actions, an agency must engage in a "reasoned evaluation of the relevant factors." *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992). An agency's failure to include and analyze information that is important, significant, or essential renders an EIS inadequate. 40 C.F.R. § 1500.1. These fundamental NEPA principles apply to both the economic and environmental analyses in an EIS. *See Animal Defense Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir. 1988); *Hughes River Watershed Council v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996) ("For an EIS to serve [its] functions, it is essential that the EIS not be based on misleading economic assumptions."); 40 C.F.R. § 1502.23 (cost-benefit analysis); 40 C.F.R. § 1508.8 (the "effects" that an EIS must evaluate include economic impacts), *id.* at § 1508.14 (requiring discussion of interrelated economic or social impacts in EIS). Agencies are additionally required to ensure the professional integrity of all discussions and analyses in an EIS, including economic analyses. Id. § 1502.24. Thus, an EIS that relies on misleading economic information or fails to include all relevant costs in its economic analysis cannot fulfill NEPA's purpose of providing decision-makers and the public a valid foundation on which to judge proposed projects. *See, e.g., ONRC v. Marsh*, 832 F.2d 1489, 1499 (9th Cir. 1987); *Animal Defense Council*, 840 F.2d at 1439.

Applying these principles in *Hughes River Watershed Council*, 81 F.3d at 446-48, the Fourth Circuit found the Corps violated NEPA because its EIS for a proposed dam construction

project overstated recreation benefits and undermined the decision-makers' ability to balance the environmental impacts and economic benefits. Similarly, in *Van Abbema v. Fornell*, 807 F.2d 633, 640-42 (7th Cir. 1986), the Seventh Circuit concluded the Corps' economic analysis relied on inaccurate data, unexplained assumptions, and outdated reports. *See also Johnston v. Davis*, 698 F.2d 1088, 1094 (10th Cir. 1983) (unqualified use of artificially low discount rate in economic analysis, even though legally required, resulted in misleading EIS that violated NEPA); *Sierra Club v. Sigler*, 695 F.2d 957, 975-76 (5th Cir. 1983) ("There can be no 'hard look' at costs and benefits unless all costs are disclosed.").

The DEIS fails to satisfy any of these requirements. As explained more fully in the attached comments prepared on behalf of the undersigned organizations by Natural Resource Economics, the DEIS fails to discuss a host of relevant information, presents only one-sided and misleading information and conclusions about the benefits of the project, and fails to apply the requirements of NEPA, its own regulations, applicable standards and guidelines, and does not adhere to recognized professional standards for evaluating the benefits and costs of any of the alternatives. *See* Natural Resource Economics, *Comments On the Lower Snake River Programmatic Sediment Management Plan: Draft Environmental Impact Statement* (Mar. 25, 2013) at 3-14. Those comments are appended as Attachment A and fully incorporated by reference here. To correct these deficiencies, the Corps must start over and transparently evaluate the full suite of socioeconomic impacts of its preferred action and a full range of alternatives rather than relying on general statements and outdated assumptions about the costs and benefits of its preferred course.

B. <u>The EIS Presents Misleading and One-Sided Information to Show a Net Benefit From the Project and Ignores Available Information Demonstrating that the Costs Far Exceed the Benefits.</u>

Because of the Corps' failure to comply with the above requirements, the DEIS (unlike past Corps EISs on this same issue), does not even estimate a benefit/cost ratio for the preferred – or any other – alternative. We question whether that failure is a mere oversight, or whether it reflects the fact that the available information shows that this ratio shows a net detriment would result from the PSMP.

Here, the entire justification for the Corps' proposal to maintain a 14-foot navigation channel in the Snake River is that the navigation system provides net economic benefits by reducing the costs of transporting freight. But all of the available information indicates that this action will not produce those benefits and will instead result in a loss for every dollar spent.

First, as detailed in Attachment A, the available information – much of which the Corps ignored or failed to find – paints a very different picture of the current value of the waterway and indicates that the trends undermining its value are likely to continue and accelerate. But even under current conditions, dredging costs alone likely will exceed the economic benefits, if any, of the Corps' Preferred Alternative.

The DEIS shows that, between 1982 and 2006, the Corps dredged about 4 million cubic yards of material above Lower Granite Dam, or more than 150,000 cubic yards per year, on average. DEIS at 1-10 and 1-11. The Corps estimated in 2005 that dredging this annual volume costs at least $2 million. These

costs will at least carry forward and likely increase over the time period of the PSMP, especially as the volume of sediment likely will increase over time. Grain shippers – the primary beneficiary of the navigation system – avoid, on average, costs of about $1–2 million per million tons of grain shipped by barge. In recent years, the Port of Lewiston, the primary beneficiary of dredging in the Lower Granite reservoir, has shipped about 500,000 tons of grain per year by barge. Assuming a continuation of these volumes (a conservative assumption given other developments in regional transportation),

> grain shippers would incur additional costs of $0.5–1.0 million per year, if they were unable to ship by barge. The avoidance of these costs represents the Preferred Alternative's primary economic benefit. This benefit, $0.5–1.0 million per year, however, falls short of the annualized cost of dredging of at least $2 million.

Attachment A at 16. *See also id*. at 17 (explaining similarly negative cost/benefit ratio even when considering all cargo moving through Lower Granite navigation locks). In fact, at present levels of shipping from the Port of Lewiston, the subsidy for barge transport for channel dredging alone is $11,000 for every full barge that leaves the port. If the $16 million cost of the DEIS is amortized over the next 20 years and included as a cost of this dredging, that subsidy rises to $18,000 per barge.

There is other information available, however, that shows the net costs of dredging the navigation channel are even larger than this. Shipments through the waterway have steadily declined over the past decade, with most of this decline occurring even before the recession that began in 2007. *See* Attachment A at 17 (summarizing a 47 percent decline in shipping over Lower Granite, 30 percent over Little Goose, 31 percent over Lower Monumental, and 33 percent over Ice Harbor).[16] If these volumes continue to decline in the future, any potential benefits from maintaining the navigation channel, all else equal, will decline as well.

Indeed, although the Corps does not discuss the issue in the DEIS, further declines are likely. As long ago as 2003, close to one third of the grain from this region was already shipped by rail or truck. The Ritzville train loading facility completed in 2002 had an immediate and significant impact on shipping from this region. *See* Attachment A at 17-18 (discussing study showing 30 percent drop in barging and concomitant increase in rails use at Ritzville facility by 2005). The trend toward rail shipping continues. The soon-to-be-opened McCoy shuttle train

[16] While the recession no doubt had an impact, this decline in barge shipping had been underway for the previous six years. Pulp and paper, wood products, and grains make up about 90% of what is barged on the Snake. In 2000, for example, the Port of Lewiston shipped 914,344 tons of wheat, by far its primary export. That number had declined steadily to 681,005 tons in 2005 and to 499,505 by 2011. Container shipments from the Port of Lewiston declined from 17,590 twenty-foot equivalent units (TEUs) in 2000 to 5735 TEUs in 2005 and to 3653 TEUs in 2011. Pulp and paper shipments at Lower Granite dam declined 85% from 2000 to 2005, then another 37% from 2005 to 2010, for a total 10-year decline of 90%. Wood products declined 40% over the ten-year period. The Port of Lewiston, for example, has not shipped any lumber for the past 5 years. For all products passing through the Lower Granite lock, tonnage declined 45% from 2000-2010, with more than half of this decline occurring before 2006. Changes at Lower Granite closely mirror changes at the other three Snake River dams.

loader facility near Oakesdale will provide yet another competitive alternative to trucking grain for shipment by barge on the waterway. In all likelihood, the facility will result in diverting even more grain to rail that otherwise would be shipped by barge. The DEIS does not discuss – or even mention – either of these developments or the likelihood that they further decrease any navigation-related economic benefits.

What little information on economics the Corps does present in the DEIS ignores all of this evidence and grossly exaggerates the volume of commercial freight transported on the lower Snake River and overestimates the benefits of the system. For example, the DEIS broadly – but without any explanation – asserts that approximately 10 million tons of cargo are transported annually on the lower Snake River. DEIS at 3-43. But the Corps' own figures reveal that this 10-million ton figure in the DEIS overstates the facts. According to the Corps' Waterborne Commerce Statistics Center (WCSC), the total tonnage passing Ice Harbor Dam (the first dam on the Snake River above the confluence with the Columbia) in 2010 was only about 2.9 million tons, roughly half of the tonnage that passes over McNary dam.[17]

The amount of cargo transported on the Snake River is even less significant when viewed on a national scale. The Lower Snake River carries 5 percent of total tonnage of the Columbia/Snake River System and about 1/2 of 1 percent of the nation's total tonnage on inland waterways. In terms of ton-miles, a more accurate reflection of a given river's relative importance in U.S. waterborne freight transport, the Lower Snake River accounts for a mere 1/10th of 1 percent of all freight transported on the U.S. inland waterway system.[18]

Moreover, the overall costs of maintaining the Columbia/Snake River system include much more than those required for channel dredging at the Snake/Clearwater confluence. For example, the Corps spent $43.6 million on lock repairs on the Columbia/Snake River inland waterway in 2010/2011 after spending more than $200 million for the lock replacement at Bonneville Dam. The cost of other lock and dam repairs since 2004 totals $24 million. Thus over the past 8 years, the Corps has spent at least $267.6 million for direct repairs and improvements needed to keep barges traveling up and down the Snake and Columbia Rivers. That figure does not include the Corps' operations and management costs or any share of the more than $180 million of lower Columbia dredging expenditure to allow larger ocean-going ships to reach the ports at Portland or Vancouver. Nor does it include the costs (or even some percentage share of the costs) of failed measures to mitigate the impacts of the Snake River dams on salmon and steelhead, which would add hundreds of millions more to this total.

[17] According to the WCSC, total tonnage passing through McNary locks in 2010 was only 5.5 million tons. All marine freight traveling from and to the Snake River and to ports in the mid-Columbia, including the Pasco, Kennewick and Richland area, passes through the McNary lock. Given this, it is difficult to understand how the Corps arrives at its 10 million tons per year figure for just the Snake River.

[18] In 2010, total ton-miles on all U.S. inland waterways was 263.2 billion. In 2010, the entire Columbia-Snake River System provided 2.2 billion ton-miles to the national total, or 0.8 percent. The lower Snake River provided 0.3 billion-ton miles of waterborne freight movement, or 0.1 percent of all U.S. inland waterway freight movement.

Recognizing the extent of its infrastructure and agency responsibilities, the growing rate of deterioration of its facilities and decreasing agency and federal budgets, the Corps recently requested the National Academy of Sciences to prepare a report on possible options. The resulting report: *Corps of Engineers Water Resources Infrastructure: Deterioration, Investment, or Divestment?* noted that the Corps is in "an unsustainable situation for maintenance of existing infrastructure. This scenario entails increased frequency of infrastructure failure and negative social, economic, and public safety consequences." One major alternative outlined in the NAS report suggests the possible divestiture or decommissioning of parts of the Corps' infrastructure. In light of the information provided above, the maintenance of barge transportation on the Lower Snake River appears to be a good candidate for such consideration. Given this recommendation, the requirements of NEPA, and the Corps' proposal to maintain the Snake River as a waterway through the PSMP, this DEIS is the place where the Corps should examine that alternative.

IX. THE CORPS' FLAWED NEPA ANALYSIS ALSO INFECTS ITS RESPONSIBILITIES TO COMPLY WITH THE CLEAN WATER ACT

The Corps' flawed NEPA analysis also infects its responsibilities to comply with the Clean Water Act. Like NEPA, the Clean Water Act ("CWA") requires that, before proceeding with projects affecting water of the United States, the Corps conduct an analysis of the project's potential impacts. The CWA seeks to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). One mechanism through which it serves these ends is by prohibiting the discharge of pollutants into navigable waters without a § 404 permit. 33 U.S.C. § 1344(a); 33 C.F.R. § 320.4(a)(1). The public interest review required to issue that permit is similar to NEPA and requires that "[t]he benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments." *Id.*

Thus, just like NEPA, the CWA requires the Corps to conduct a comprehensive analysis of the impacts of dredging and levee construction before those projects may proceed. The Corps' failure to do so in this DEIS therefore not only violates NEPA, but if not corrected, also infects its CWA permitting process. *See Friends of the Earth v. Hall*, 693 F. Supp. 904, 946 (W.D. Wash. 1988) (gaps in data and scientific uncertainty in Corps' NEPA analysis fatally undermined its conclusion under § 404(b) guidelines that project would not "cause significant degradation"); *Van Abbema v. Fornell*, 807 F.2d 633, 643 (7th Cir. 1986) (Corps' reliance upon NEPA analysis's inaccurate economic information rendered CWA public interest review similarly invalid). Only with knowledge in hand can the agency determine what best serves the public interest. This EIS does precisely the opposite.

The undersigned groups will detail their CWA concerns further in commenting on the Public Notice issued by the Corps on March 11, 2013.

CONCLUSION

As detailed throughout these comments, the context in which the Corps is considering a long-term plan to maintain the navigation channel in the Lower Snake River has changed substantially since the Corps last considered the maintenance of the navigation channel. Those changes and the new information behind them, however, are not reflected in the DEIS; rather, the

Corps in the DEIS continues to take the same narrow view of its responsibilities and potential alternatives that has led to substantial controversy in the past. We urge the Corps in its final EIS to take a far broader – and more accurate – view of its legal responsibilities by giving adequate consideration to non-dredging alternatives and by properly disclosing the full costs, ecological and monetary, of its proposed actions.

If you have any questions about these comments, or would like to discuss any matter discussed in these comments, please contact any of the undersigned.

Sincerely,

/s/

Steve Mashuda
Matt Baca
Earthjustice
705 Second Ave
Suite 203
Seattle, WA 98112
smashuda@earthjustice.org
mbaca@earthjustice.org

Michael Garrity
Washington State Conservation Director
American Rivers
608 N Sheridan Ave
Tacoma, WA 98403

Dustin Aherin
Citizens for Progress
Lewiston, ID

Gary Macfarlane
Ecosystem Defense Director
Friends of the Clearwater
PO Box 9241
Moscow, ID 83843

Kevin Lewis
Conservation Director
Idaho Rivers United
PO Box 633
Boise, ID 83701

Linwood Laughy
Karen S "Borg" Hendrickson
5695 Highway 12
Kooskia, Idaho 83539

Glen Spain
Pacific Coast Federation of Fishermen's Associations
and Institute for Fisheries Resources
PO Box 11170
Eugene, OR 97440-3370

Pat Ford
Executive Director
Save Our Wild Salmon
200 First Ave. West
Suite 107
Seattle, WA 98119

Edwina Allen
Chair, Idaho Chapter of the Sierra Club
PO Box 552
Boise, ID 83701

Bob Margulis
Executive Director
Wild Steelhead Coalition
Seattle, WA

ATTACHMENT A

Comments

On the Lower Snake River Programmatic Sediment Management Plan: Draft Environmental Impact Statement

25 March 2013

Natural Resource Economics

1430 Willamette St., # 553
Eugene, Oregon USA 97401
www.nreconomics.com

These comments were prepared on behalf of American Rivers, Earthjustice, Friends of the Clearwater, Borg Hendrickson, Linwood Laughy, Idaho Rivers United, Institute for Fisheries Resources, Pacific Coast Federation of Fishermen's Associations, Save Our Wild Salmon, and Sierra Club by Ernie Niemi of Natural Resource Economics, Inc., which is solely responsible for their content.

Table of Contents

I. Executive Summary

The Walla Walla District of the U.S. Army Corps of Engineers (Corps) has published a draft environmental impact statement (DEIS) for the Programmatic Sediment Management Plan (PSMP) for the Corps' Lower Snake River Project (LSRP). The Corps' Preferred Alternative for the PSMP, if adopted, would provide the programmatic framework for evaluating and implementing potential sediment management measures the Corps will define in the future. The Preferred Alternative would employ all available measures, including dredging and the construction of new structures, to manage sediment in the river to maintain a navigation channel that would enable barge traffic along the Lower Snake River from its confluence with the Columbia River to the Port of Lewiston, Idaho.

In preparing the PSMP DEIS, the Corps had an obligation, under the National Environmental Policy Act (NEPA) to provide details of the environmental consequences of the Preferred Alternative "to the fullest extent possible." The courts have interpreted this obligation as a "requirement of a substantial, good faith effort at studying, analyzing, and expressing the environmental issues in the EIS and the decisionmaking process,"[1] including the socioeconomic impacts of the action and its alternatives. The Corps also had obligations to satisfy widely accepted professional standards of analysis, as well as the agency's own analytical standards. Moreover, it had an obligation to formulate an alternative that would maximize net national economic development benefits, consistent with the authorized purposes of the LSRP, and to choose it as the one it prefers unless it could demonstrate that the beneficial effects of another alternative would outweigh the corresponding national economic development losses.

The PSMP DEIS fails completely to satisfy these obligations with respect to socioeconomics. Rather than presenting "to the fullest extent possible" the details regarding the socioeconomic consequences of the Preferred Alternative, it provides no details whatsoever. This gap does not stem from a lack of relevant information. Extensive socioeconomic information exists regarding major elements of the Preferred Alternative, such as the annualized dredging costs to maintain the navigation channel, the amount of freight that uses the channel, the benefits to shippers who realize cost savings when they send their freight via barge rather than use other transportation modes, investments in the rail system likely to extend its ability to draw future shipping traffic away from the barge system, the transportation system's likely response if the navigation channel were not maintained, and the impacts of a cessation of barge traffic in the Lower Snake on regional jobs and incomes.

Rather than present a "substantial, full faith effort at studying, analyzing, and expressing" the socioeconomic issues associated with the PSMP and the process that resulted in the selection of the Preferred Alternative, the DEIS presents vague, superficial generalities. The DEIS lacks quantitative substance of any kind regarding the Preferred Alternative's economic costs and benefits; its impacts on economic activity, jobs, and incomes in the surrounding region; and the uncertainties and risks that would accompany implementation of the Preferred Alternative. Contrary to professional standards established by the President, the Office of Management and Budget, and the Corp itself, the DEIS never identifies the effects on net national economic benefits (or costs) or on net regional jobs and incomes as relevant issues for evaluating the

[1] Natural Resources Defense Council v. Morton, 458 F.2d 827, 838 (D.C. Cir., 1972).

various alternatives' socioeconomic consequences. Nor does it report that the decision-making process for selecting the Preferred Alternative employed the maximization of these variables as relevant selection criteria. As a result, the DEIS provides no socioeconomic basis for the selection of the Preferred Alternative, nor does it come close to providing the public with the information it needs to judge the socioeconomic reasonableness of that decision.

The DEIS never formulates an alternative that would maximize net national economic development benefits, nor does it describe each alternative's national economic development costs and benefits. Lacking this information, the DEIS makes no mention of the Preferred Alternative's net national economic development benefits.

Substantial, readily available information, however, indicates that the Corps' Preferred Alternative likely would have a negative net effect on national economic development, i.e., its costs would exceed its benefits. In contrast, this information suggests that taking no action likely would have a positive effect, by avoiding expenditures on dredging and sediment-control structures aimed at maintaining the navigation channel through the Lower Granite Pool. The dredging costs, alone, under the Preferred Alternative likely would exceed the economic benefits of maintaining barge traffic to and from this pool. Overall, maintaining the navigation channel, as proposed under the Preferred Alternative, likely would result in wasteful use of economic resources to subsidize barge traffic, reduce economic growth to the extent that those resources otherwise would be put to better use, and curtail opportunities for jobs and incomes associated with competing systems, especially rail, for moving freight into and out of the LSRP region. In other words, the DEIS presents information and selects a Preferred Alternative biased in favor of dredging and other activities that require taxpayer support and subsidies to the barge industry. Taking no action, however, would yield more desirable socioeconomic outcomes for everyone except the beneficiaries of those subsidies.

To rectify these shortcomings in the DEIS, the Corps must start over. It must identify socioeconomic issues—such as the net economic benefits (or costs) of sediment management and the long-term regional impacts on jobs and incomes—relevant for evaluating and choosing among alternatives for managing sediment in the LSRP. For each issue, the Corps must specify appropriate analytical methods and data for examining the absolute and relative effects of different management approaches. It then must define a baseline scenario that describes, from a socioeconomic perspective, the status of each issue without federal action, and employ the methods and data to describe in detail how each alternative would make the world different. For each alternative, it must, at a minimum, specify relevant assumptions and determine the benefits and costs and the changes in jobs and incomes relative to the baseline scenario, with a full discussion of the significant uncertainties and risks. With this detailed, comparative information in hand, it then must define the socioeconomic criteria appropriate for comparing the alternatives, apply the criteria, and explain, from a socioeconomics perspective, which of the alternatives is the Preferred Alternative.

II. Background

In December 2012 the Corps' Walla Walla District published a draft environmental impact statement (DEIS) for the Programmatic Sediment Management Plan (PSMP) for the Corps' Lower Snake River Project (LSRP).[2] Its stated purpose is to adopt and implement actions for emergency, short-term, and long-term management of sediment that interferes with the Corps' interpretation of the authorized purposes of the LSRP. These stated purposes are commercial navigation, recreation, and fish and wildlife conservation and mitigation. The PSMP attempts to provide a programmatic framework to evaluate and implement potential sediment management measures that, if the PSMP is adopted, will be developed in the future.

In developing the PSMP DEIS, the Corps formulated seven alternatives, but evaluated in detail only these three:

Alternative 1 - No Action (Continue Current Practices)

> "The No Action Alternative represents a continuation of the Corps' current operational practices of managing the LSRP through navigation objective reservoir operations in the lower Snake River, and sediment reduction measures implemented in the Snake River watershed by other agencies and land managers."[3]

Alternative 5 – Dredging-Based Sediment Management

> "Alternative 5 represents a continuation of the Corps historical practices of using dredging as the primary tool for managing sediment that interferes with authorized uses of the LSRP. The Corps would continue its current program of monitoring sediments that affect the authorized purposes of the LSRP. Sediment management would consist of dredging and dredged material management. Sediment management activities would be undertaken in response to or anticipation of sediment accumulation problems.
>
> Agencies and land owners responsible for land management in the basins that drain into the LSRP (including federal and state agencies, tribes, and conservation districts) would continue to implement existing land management programs and practices related to erosion control, consistent with their current authorizations and funding. The Corps would continue implementing erosion and sediment control on lands adjacent to the LSRP."[4]

Alternative 7 – Comprehensive (Full System and Sediment Management Measures)

> "Alternative 7 is a combination of Alternatives 5 and 6 and provides all available dredging, system and structural measures for the Corps to manage sediments that interfere with the authorized uses of the LSRP. The alternative includes dredging and dredged material management along with other sediment and system management measures, and provides the Corps with a complete toolbox for addressing sediment that interferes with the authorized purposes of the LSRP.[5]

The Corps selected Alternative 7 as its Preferred Alternative. In its socioeconomic evaluation leading to the selection, the PSMP DEIS concluded Alternative 7 would have the effects shown in Table 1.

---

[2] U.S. Army Corps of Engineers, Walla Walla District. 2012. *Lower Snake River Programmatic Sediment Management Plan Draft Environmental Impact Statement.* Retrieved 4 February 2013 from http://www.nww.usace.army.mil/Missions/Projects/ProgrammaticSedimentManagementPlan.aspx.

[3] *PSMP DEIS*, pp. 2-22, 23.

[4] *PSMP DEIS*, p. 2-28.

[5] *PSMP DEIS*, p. 2-31.

Table 1. Socioeconomic Effects of Alternative 7, Reported in the PSMP DEIS

- Beneficial use of dredged material for fish habitat creation or ecosystem restoration projects, which would have indirect benefits, including potential recreation benefits.
- Minor, short-term, beneficial direct effects on income and employment through construction activities.
- No long term impacts to population, employment, and income.
- No adverse impacts to the transportation and related sectors, because Alternative 7 includes actions to maintain current navigation operations.
- Temporary interruptions in commercial navigation, which would also affect port operations.
- Positive economic impact to the navigation and related industries in the region because navigation interests would not need to light load and would not have to take the extra measures they now take to position and move tugs and barges.
- Relocation or reconfiguring of affected facilities would temporarily interrupt economic activity associated with them.
- Construction activity associated with the relocation or reconfiguration would create a temporary local economic benefit.
- Modifying flows to flush sediments would have a temporary adverse impact on commercial and recreational navigation.
- Adverse impacts on the capacity of the rail or highway system whenever interruption of or constraints on the navigation system shifted shipments to other modes.
- A long-term beneficial effect on navigation, by improving the navigation channel.
- There may be some loss of grain sales if enough grain cannot be shipped out of the affected pool, but use of downstream storage facilities and shipping of grain prior to drawdown would minimize economic effects.
- Impairment of navigation would lead to stock-piling of commodities other than grain, such as fuel oil, gasoline, chemicals, and wood products. Trucks or rail could be used to transport these commodities for short-term supply. This will temporarily increase costs to those who usually use the river system for the transportation of commodities, but the increases should be small.
- Loss of hydroelectric power sales for the region.
- Potential disruption by reservoir drawdown of cruise ship traffic, causing economic loss for the cruise industry and the local supporting industries in the affected area.
- Potential adverse effects from reservoir drawdown on infrastructure adjacent to and crossing Lower Granite Reservoir.
- Potential maintenance of an acceptable level of flood protection for a portion of downtown Lewiston if the levee is raised.

Source: *PSMP DEIS* p. 2-36, pp. 3-30 – 3-51, pp. 4-31 – 4-34.

By choosing this alternative, the Corps, in effect, has determined that, in some configuration, dredging and construction of structures offer the most desirable socioeconomic and other environmental consequences. If the PSMP and the Preferred Alternative are adopted, subsequent environmental review will focus on the specifics of the configuration of these measures, not on whether or not to proceed with dredging and construction.

III. Comments

The National Environmental Policy Act (NEPA) sets the stage for defining the analytical standards the Corps must meet in developing an environmental impact statement (EIS) for the PSMP. It states that federal agencies "to the fullest extent possible" must provide a detailed EIS (42 U.S.C. 4332). In applying this standard, courts have held that, at a minimum, NEPA imposes on an agency a duty to take a "hard look at environmental consequences" (Natural Resources Defense Council v. Morton, 458 F.2d 827, 838 (D.C. Cir., 1972)) and a "requirement of a substantial, good faith effort at studying, analyzing, and expressing the environmental issues in the EIS and the decisionmaking process" (Natural Resources Defense Council v. Morton, 458 F.2d 827, 838 (D.C. Cir., 1972)). A sufficient EIS must provide good faith analysis and sufficient information to allow a firm basis for weighing the risks and benefits of a proposed action (County of Suffolk v. Secretary of the Interior, 562 F.2d 1368 (2nd Cir. 1977), cert. denied, 434 U.S. 1064 (1978)).

The Corps also is obligated to comply with widely accepted professional standards of socioeconomic analysis applicable to this setting. These standards have been described through presidential executive order, follow-up guidance from the Office of Management and Budget, and analytical principles and guidelines developed by the Water Resources Council. Consistent with NEPA, these standards generally require providing the public and decision-makers with all relevant information about the potential socioeconomic effects of each alternative.

The socioeconomic analysis in the PSMP DEIS fails to satisfy these requirements. Its shortcomings fall into these two distinct, but related categories:

A. The PSMP DEIS falls far short of its obligations to provide all relevant information and demonstrate a good faith effort at studying and analyzing the socioeconomic consequences of the Preferred Alternative. The socioeconomic elements of the DEIS ignore a large body of socioeconomic information relevant to the EIS, provide no analytical basis whatsoever for the Corps' selection of the Preferred Alternative, and fail to provide the public and decision-makers with coherent and reliable information they can use to assess the socioeconomic consequences of implementing this alternative.

B. The PSMP DEIS presents an incomplete and biased picture of the socioeconomic effects of the Preferred Alternative, exaggerating its positive effects and diminishing or overlooking its negative effects. Information not included in the DEIS indicates that implementation of the Preferred Alternative likely would result in negative overall socioeconomic outcomes, with the benefits smaller than the costs of producing them.

The following discussion fleshes out each of these shortcomings and describes the actions the Corps must take to rectify them.

A. The PSMP DEIS Does Not Meet Relevant Analytical Standards

Three sets of standards apply to the Corps' socioeconomic analysis in the PSMO DEIS. One includes the generally accepted, professional standards that apply to analyses of this type and govern the assessment of the accuracy, precision, and reliability of the analytical results. The second includes standards specifically applicable to Corps. The third includes the standards embedded in the Environmental Operating Principles expressed at the beginning of the PSMP DEIS.

1. The PSMP DEIS Does Not Meet Generally Accepted, Professional Standards

The Corps can satisfy its obligation to describe fully the socioeconomic effects of the PSMP only if it uses relevant, widely accepted, professional standards of analysis. These standards are expressed through Presidential Executive Order 12866 and related guidance from the Office of Management and Budget (OMB).

Executive Order 12866: Regulatory Review and Planning specifies standards for economic analyses.[6] Although it uses regulatory actions as its focus, the standards are widely accepted among professional economists to have broader application. These are the core standards expressed in Executive Order 12866:

- Each agency shall assess both the costs and the benefits….
- Each agency shall…impose the least burden on society….

The first statement makes clear the Corps' obligation to assess both the costs and the benefits of each alternative approach for managing sediment in the LSRP. The second statement requires the Corps to select a Preferred Alternative only after measuring the net benefits (or costs) of each alternative and determining that the Preferred Alternative has the greatest net benefit (least net cost), so that its implementation would impose the least burden on society. The PSMP DEIS makes no demonstrable effort to satisfy either of these obligations.

It does not assess the costs and benefits of any alternative. Indeed, it provides no substantive discussion of costs whatsoever. Instead, it offers at most vague promises—"Based on Corps regulations, the Corps would evaluate disposal options to identify the least costly…." (p 2-29)—and contingencies—"Changes to the ways in which barge tows are operated could affect the costs of barge shipping…." (p.4-33). The terms, "cost" and "costs," appear rarely in the discussion of the socioeconomic effects of the alternatives (Section 4.5), but never in the context of actually measuring anything. That is, the DEIS never links these terms with any dollar amount. Thus, it contains no quantified discussion, let alone analysis, of the Preferred Alternative and fails completely to satisfy widely accepted professional standards of socioeconomic analysis that require thorough assessment of the costs, in monetary terms where possible and in detailed qualitative terms where not.

Similarly, the PSMP DEIS does not assess the socioeconomic benefits of each alternative. The terms, "benefit" and "benefits" collectively appear only a few times in the discussion of the socioeconomic effects of the alternatives, but none is the basis for measuring and comparing the socioeconomic benefits of the different alternatives. Instead, the PSMP DEIS uses the terms only to refer generally to vague assumptions: "Beneficial use of dredged material for fish habitat creation or ecosystem restoration projects would have indirect benefits, including potential recreation benefits" (p. 4-32); "construction activity…would create a temporary local economic benefit (p. 4-33); and "maintaining acceptable levels of flood protection in Lewiston, the result would be positive long-term benefits to the communities protected by the levees" (p. 4-34). The DEIS makes no attempt to quantify the potential socioeconomic benefits of the Preferred Alternative, or of the other alternatives. It mentions benefits only in the abstract and, thus, fails to satisfy widely accepted professional standards of socioeconomic analysis that require thorough assessment of the benefits, in monetary terms where possible and in detailed

[6] Available at http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf.

qualitative terms where not.

Lacking any description of the socioeconomic costs and benefits of each alternative, the PSMP DEIS does not even attempt to describe or quantify the net benefits (net costs) of each. With no information about their respective net benefits or costs, the PSMP DEIS offers no evidence that the Preferred Alternative would impose the least socioeconomic burden on society. There is simply far too little information in the DEIS to rank the alternatives given the total lack of any description, and especially a quantified monetary description, of the net benefits (net costs) of each. Thus, the PSMP DEIS fails completely to meet the general standards that must be satisfied if the DEIS is to satisfy the obligations specified by the courts under NEPA. This conclusion becomes even stronger when the socioeconomic sections of the PSMP DEIS are compared to the analytical guidance associated with Executive Order 12866.

Office of Management and Budget (OMB) Circular A-4: Regulatory Analysis, provides operational, analytical guidance for satisfying the standards of Executive Order 12866.[7] Here is a short description of some of the core elements of this guidance, and how the Corps complied with each in the PSMP DEIS :

- "A good…analysis is designed to inform the public and other parts of the Government (as well as the agency conducting the analysis) of the effects of alternative actions … Benefit-cost analysis is a primary tool used for…analysis." (p. 2)
  The PSMP DEIS, however, contains no socioeconomic benefit-cost analysis, nor any comparison of the alternatives' net benefits (or net costs).
- "To evaluate properly the benefits and costs of…alternatives, you will need to do the following:
  - "Identify a baseline. Benefits and costs are defined in comparison with a clearly stated alternative. This normally will be a "no action" baseline: what the world will be like if the proposed rule is not adopted."
    The PSMP DEIS, however, does not identify a baseline scenario of the future showing, from a socioeconomic perspective, what the world will be like if the Preferred Alternative is not adopted. It superficially identifies "current operational practices" under the "No Action" alternative as the baseline, but nowhere provides information regarding what specific socioeconomic variables will look like in the future under this alternative. With no quantitative description of the baseline, the PSMP DEIS cannot and does not provide a basis for assessing the socioeconomic effects of the referred Alternatives against those of the other alternatives.
  - "Identify the expected undesirable side-effects and ancillary benefits of the…alternatives. These should be added to the direct benefits and costs as appropriate." (pp. 2-3)
    The PSMP DEIS, however, mentions some side-effects and ancillary benefits, but never in quantitative terms that would allow adding them to the direct benefits and costs. For example, it says that using dredged material to create fish habitat or restore ecosystems "would have indirect benefits, including potential recreation benefits." (p. 4-32), but it provides no detailed description of these benefits and their socioeconomic significance, nor does it offer qualitative or quantitative information for assessing how these side-effects and ancillary benefits would vary across the alternatives.
- "When your analysis is complete, you should present a summary of the benefit and cost estimates for each alternative, including the qualitative and non-monetized factors …, so that readers can evaluate them." (p. 3)

[7] *Available at* www.whitehouse.gov/omb/circulars_a004_a-4.

The PSMP DEIS, however, does not provide a summary of the socioeconomic factors, qualitative or quantitative, that would allow readers to evaluate the alternatives against one another.

- "A good analysis is transparent. It should be possible for a qualified third party reading the report to see clearly how you arrived at your estimates and conclusions. For transparency's sake, you should state in your report what assumptions were used, such as the time horizon for the analysis and the discount rates applied to future benefits and costs. It is usually necessary to provide a sensitivity analysis to reveal whether, and to what extent, the results of the analysis are sensitive to plausible changes in the main assumptions and numeric inputs." (p. 3)

  The socioeconomic sections of the PSMP DEIS, however, contain no statement of assumptions or sensitivity analysis – none – making it impossible to see how the Corps arrived at its estimates and conclusions.

- "You should show that a government intervention is likely to do more good than harm." (p. 4)

  The PSMP DEIS, however, does not show that the Preferred Alternative is likely to do more socioeconomic good than harm. Instead, it provides only general statements asserting that the Preferred Alternative would yield benefits for some groups. For example, it states, "Modifying flows to flush sediments (drawdown)…would have a long-term beneficial effect on navigation, by improving the navigation channel." (p. 4-33) It provides no yardstick – indeed, no quantitative information at all – for gauging the socioeconomic importance of these benefits, however. Nor does it provide any information about the magnitude of the simultaneous socioeconomic cost that a drawdown would impose on taxpayers, competitors of the barge companies, or others.

- "You should be alert for situations in which…alternatives result in significant changes in treatment or outcomes for different groups. Effects on the distribution of income that are transmitted through changes in market prices can be important, albeit sometimes difficult to assess. Your analysis should also present information on the streams of benefits and costs over time in order to provide a basis for assessing intertemporal distributional consequences, particularly where intergenerational effects are concerned." (p. 14)

  The PSMP DEIS, however, provides only general statements about the distribution of socioeconomic effects on current groups. For example, it observes that the Preferred Alternative's long-term beneficial effect on navigation "could adversely affect the capacity of the rail or highway system." (p.4-33) It makes no effort to detail these effects or assess their magnitude, however. Moreover, the socioeconomic elements of the PSMP DEIS contain no information whatsoever for assessing the intertemporal distributional consequences, i.e., the effects on future generations, of implementing the Preferred Alternative and for comparing them to those of the other alternatives.

2. The PSMP DEIS Does Not Meet Agency-Specific Standards

The agency-specific standards include a requirement that, before proceeding with the Preferred Alternative, the Corps must demonstrate, with reasonable certainty, that its benefits to the national economy will outweigh its costs. Evaluation of the national economic benefits and costs are to be addressed in the so-called National Economic Development (NED) account, with monetary measurement of benefits (increases in the economic value of goods and services) and costs (decreases in economic value). This requirement, described in the *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (Principles and Guidelines)*,[8] is generally equivalent to the one stated above in Executive Order

[8] U.S. Water Resources Council. 1983. *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*. Specifically, the *Principles and Guidelines* state:

"The Federal objective of water and related land resources planning is to contribute to national economic development consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements.

12866: the Corps must demonstrate that the Preferred Alternative is the one that will impose the least economic burden on society.

The PSMP DEIS acknowledges the relevance of the *Principles and Guidelines* to the document when it observes that reductions in the generation of hydropower "are a National Economic Development cost." (p. 4-34) The PSMP DEIS does not, however, quantify this cost or any other cost. Nor does it present an evaluation of each alternative's national economic benefits and costs, and net benefits (net costs). Thus, it ignores the agency's own standards of analysis.[9]

These standards require a full accounting of costs and benefits that would accrue to other projects or to third parties. This obligation is recognized clearly in the Corps' manual. "Many economic activities provide incidental benefits to people for whom they were not intended. Other activities indiscriminately impose incidental costs on others. These effects are called externalities. ...**Negative externalities** make someone worse off without that person being compensated for the negative effect. ...The NED principle requires that externalities be accounted for in order to assure efficient allocation of resources."[10] The socioeconomic elements of the PSMP DEIS make no mention of externalities, however. Yet several are immediately obvious, such as the impacts of dredging and other activities on the population and value of salmon, and the effects of the Preferred Alternative on the emission of airborne and waterborne pollutants harmful to human health, fish, and wildlife.

The Corps also had an obligation to distinguish between each alternative's benefits and costs, i.e., changes in economic value of goods and services, and its impacts on jobs, incomes, and other indicators of the level and distribution of economic activity. The *Principles and Guidelines* explains benefits and costs in the context of national economic development. Accordingly, the PSMP might generate benefits or costs by increasing or decreasing the economic value of the

---

"…Contributions to national economic development (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct net benefits that accrue in the planning area and the rest of the nation. Contributions to NED include increases in the net value of those goods and services that are marketed, and also of those that may not be marketed." (p. 1)

"[I]n addition to a plan which reasonably maximizes contributions to NED, other plans may be formulated which reduce net NED benefits in order to further address other Federal, State, local, and international concerns not fully addressed by the NED plan. These additional plans should be formulated in order to allow the decisionmaker the opportunity to judge whether these beneficial effects outweigh the corresponding NED losses." (p. 7)

[9] Although the Corps acknowledged, but did not apply, the 1983 *Principles and Guidelines*, the Council on Environmental Quality recently released a new set of *Principles and Requirements for Federal Investments in Water Resources* and draft Interagency Guidelines that supersede the *Principles and Guidelines*. *See* http://www.whitehouse.gov/administration/eop/ceq/initiatives/PandG. The *Principles and Requirements* is consistent with many of the factors discussed below. For example, it emphasizes that "Federal investments in water resources as a whole should strive to maximize public benefits, with appropriate consideration of costs. Public benefits encompass environmental, economic, and social goals, include monetary and non-monetary effects and allow for the consideration of both quantified and unquantified measures." *Principles and Requirements* (p. 4). The Corps should closely examine and apply the *Principles and Requirements* as it completes an accurate and balanced analysis of the costs and benefits of each course of action in any final EIS.

[10] U.S. Army Corps of Engineers, Water Resources Support Center, Institute for Water Resources. 1991. *National Economic Development Procedures Manual: Overview Manual for Conducting National Economic Development Analysis.* IWR Report 91-R-11. October. pp. 21- 23 (bold emphasis in original).

national output of goods and services resulting from the PSMP; the value of output resulting from external economies caused by the PSMP; and the value associated with the use of otherwise unemployed or under-employed labor resources. (*Principles and Guidelines*, p. 8) The *Principles and Guidelines* describes a separate framework for measuring changes in economic activity, which it calls the regional economic development (RED) account. "The RED account registers changes in the distribution of regional economic activity that result from each alternative plan. Two measures of the effects of the plan on regional economies are used in the account: Regional income and regional employment." (p. 11) The PSMP can affect economic activity through expenditures that alter the pattern of income and employment, or when its impacts on the supply of goods and services, such as recreational opportunities, affects the location decisions and spending patterns of households and businesses.

The distinction between changes in value and changes in economic activity is important, because the former represents increases or decreases in the overall wellbeing of the nation's economy resulting from the PSMP and the latter indicates the distribution of wellbeing among different groups. The distinction is particularly important in this setting insofar as substantial information, discussed below, indicates that, although the DEIS asserts that implementation of the Preferred Alternative would increase economic activity, jobs, and incomes associated with dredging and the barge industry, it can do so only by reducing national economic wellbeing. The local increases, therefore, would occur only through the transfer of economic resources from the rest of the nation to the recipient businesses and workers, and the benefits to the recipients likely would not exceed the overall national costs.

The PSMP DEIS provides no information about these issues. It fails to distinguish between economic values and activity and provides, at best, no accounting of either, or, at worst, an incomplete and misleading accounting of both. For example, it states, "construction activity associated with the relocation or reconfiguration would create a temporary local economic benefit." (p. 4-33) The phrase, "temporary local economic benefit," presumably refers to an increase in income and jobs in the area. These effects are changes in economic activity, not changes in the value of goods and services available to the national economy. That is, some businesses and workers in the local economy would experience an increase in economic activity, jobs, and income because of the construction, but others—in the local economy or beyond it—would experience a reduction insofar as they would pay the taxes that would provide the funding for the construction. Hence, the benefit to some would be a cost to others. By describing the former but not the latter, the DEIS presents a biased picture of the overall economic consequences. This is an important omission, as the discussion below shows that the overall effect likely would be negative, i.e., the value of the goods and services resulting from the construction likely would be less than the value of the goods and services these taxpayers would forgo as their payment of taxes to finance the construction reduces their net earnings and disposable incomes.

The PSMP DEIS also fails to meet its obligation to give a full accounting of the Preferred Alternative's economic risks and uncertainties. This accounting should be broad, rather than narrow, in accordance with the guidance expressed by the agency's own manual: "It is the analyst's job to identify, clarify, and quantify areas of risk and uncertainty *wherever possible*, especially for those pieces of information which have a substantial influence on either the choice

of an alternative and/or its size and cost."[11] The PSMP DEIS does not identify, clarify, or quantify areas of risk and uncertainty. It especially does not quantify how risks and uncertainties under the Preferred Alternative compare with those under the other alternatives.

3. The PSMP DEIS Does Not Apply the Agency's Environmental Operating Principles

The PSMP DEIS presents a set of "Environmental Operating Principles applicable to all its decision-making and programs." It further states that, "The principles are consistent with the National Environmental Policy Act." These are four of the principles:

- Seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
- Continue to accept corporate responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems.
- Seeks ways and means to assess and mitigate cumulative impacts to the environment; bring systems approaches to the full life cycle of our processes and work.
- Build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work.

Even a cursory review of the PSMP DEIS reveals, however, that it falls far short of the aspirations expressed in these statements, failing to clarify the extent and effect of taxpayer subsidies to barging under the Preferred Alternative. This failure arises, from an economic and social perspective, insofar as the document fails to provide a full accounting of all the costs and all the benefits of each alternative, including the Corps' Preferred Alternative. As a consequence, there is no way of knowing, from the PSMP DEIS, if the Preferred Alternative represents economic and environmental solutions that support and reinforce one another. The ambiguity is especially acute because the PSMP DEIS does not provide information about the costs embedded in the Preferred Alternative. These costs are important because, to the extent that taxpayers rather than barge operators bear these costs, they represent subsidies to the barge system. As such, they distort the overall transportation system by reducing barge shipping prices below the actual costs, inducing shipments of freight by barge and barge-related investments that otherwise would not occur. The subsidies also can lead to distortions outside the barge sector, for example by drawing customers away from using rail and encouraging rail operators to reduce service or close facilities. Information presented below—but not included in the PSMP DEIS—indicates that the costs of maintaining the navigation channel exceed the benefits, and that the Preferred Alternative therefore is not consistent with the Environmental Operating Principles because it is not an economically sustainable solution to the problems the Corps is addressing.

Moreover, by being totally devoid of any accounting of socioeconomic effects, the PSMP DEIS does not demonstrate that the Corps accepts responsibility and accountability for all the consequences of the Preferred Alternative's impacts on human welfare, as required by the Environmental Operating Principles. The PSMP DEIS provides such an incomplete description of the Preferred Alternative's costs that it does not come close to complying with the

[11] U.S. Army Corps of Engineers, Water Resources Support Center, Institute for Water Resources. 1992. Guidelines for Risk and Uncertainty Analysis in Water Resources Planning, Volume I: Principles. IWR Report 92-R-1. March, p. 17 (italics emphasis added).

Environmental Operating Principles' commitment to assess and mitigate the Preferred Alternative's cumulative impacts. By disregarding the full costs of the Preferred Alternative, the PSMP DEIS dismantles, rather than builds, the integrated knowledge base called for in the statement of Environmental Operating Principles.

4. Summary of Shortcomings Regarding Analytical Standards

The PSMP DEIS falls woefully short of all the standards applicable to the analysis of the socioeconomic consequences of the PSMP. It exemplifies not the promised application of Environmental Operating Principles but the behaviors these principles seek to prevent. It does not adhere to, or even demonstrate an awareness of, applicable standards of economic analysis that the Corps must satisfy if it is to provide a good faith analysis and sufficient information to allow a firm basis for weighing the risks and benefits of the Preferred Alternative. Instead of taking a "hard look" at the socioeconomic consequences of the Preferred Alternative, the PSMP DEIS offers no more than casual observations. Instead of providing details and figures to the fullest extent possible, it offers a few, vague generalities.

Specific shortcomings include, but are not limited to:

- No explanation of significant socioeconomic issues to be addressed in managing sediment.
- No description of the process for evaluating the alternatives with respect to these issues and for incorporating their socioeconomic consequences into the selection of the Preferred Alternative.
- No description of a baseline scenario that reveals the Corps' detailed expectations of what specific, important socioeconomic variables will look like in the future without the proposed action.
- No description of how the world will look different under each alternative, relative to these socioeconomic variables.
- No description of relevant extant data and past research regarding these variables.
- No description of, or justification for, socioeconomic assumptions embedded in the design of the analysis, the analytical findings, or the comparative assessment of the alternatives based on the findings.
- No quantitative information regarding the costs and benefits of each alternative.
- No description, especially a quantitative description, of the net benefits (net costs) of each alternative.
- No comparison, especially a quantitative comparison, of the alternatives' costs, benefits and net benefits (net costs).
- No description and comparison, especially in quantitative terms, of the alternatives' impacts on jobs, income, and other indicators of economic activity.
- No assessment, quantitative or qualitative, of uncertainties and risks associated with each alternative.
- No description of the distribution of costs, benefits, jobs, income, uncertainties, and risks among different groups, including future generations.
- No summary, especially a quantitative summary substantiated by data and analysis, of the similarities and differences among the alternatives in their socioeconomic consequences.

5. Necessary Actions To Correct the Shortcomings

To correct these shortcomings, the Corps should, at a minimum, complete these steps:

1. Review and incorporate into the DEIS past research on socioeconomic issues associated with sediment management in the lower Snake River.[12] These issues include, but are not necessarily limited to:
   - The direct costs and benefits of alternative approaches for managing sediment.
   - The external costs and benefits of these alternative approaches.
   - The net benefit (net cost) of the different approaches.
   - Trends in variables affecting costs, benefits, uncertainties, risks, and the distribution of regional economic activity. These variables include, but are not necessarily limited to: construction costs, freight shipments, market structure for freight transport, availability of appropriated funds to support federal components of the navigation system, and fish and wildlife values (market and non-market values).
   - The short- and long-term effects of the different approaches on markets, including the competitiveness of different transportation modes for freight shipments.
   - Uncertainties and risks associated with each approach.

2. Augment the review of relevant past research with an appropriately designed scoping process to identify important issues and variables for assessing the socioeconomic effects of the different alternatives examined in the PSMP DEIS. These variables should include, but are not necessarily limited to:
   - Significant direct costs and benefits.
   - Significant external costs and benefits.
   - Net benefit (net cost).
   - Jobs, income, and other indicators of economic activity.
   - Significant uncertainties and risks.
   - Significant trends in construction costs, dredging costs, freight shipments, fish populations, fish values, and other relevant socioeconomic variables.
   - The short- and long-term effects of the different approaches on markets and economic activity, including the competitiveness of different modes for freight shipments.

3. Prepare a baseline scenario that describes in detail what the relevant socioeconomic variables will look like in the future absent federal action. As part of this step, describe key assumptions.

4. Describe fully the costs, benefits, and net benefits (costs) of each alternative from the national economic development perspective, accounting for those that can reasonably be expressed in monetary terms, as well as those that cannot. As part of this step, describe key assumptions.

5. Describe fully the impact of each alternative on the distribution of regional economic activity, focusing on employment and income. Account fully for income transfers to the region resulting from implementation outlays, subsidies to navigation and other modes,

[12] Some of this relevant research is specific to this geographic area, but research with a broader scope or from other areas may also be relevant.

transfers of economic resources into or out of the region, indirect effects, and induced effects. Describe in detail the allocation of economic activity associated with different transportation modes. As part of this step, describe key assumptions.

6. Describe fully the uncertainties and risks associated with each alternative. As part of this step, describe key assumptions.
7. Provide a summary comparison of the alternatives that includes: (a) costs, benefits, net benefits (net costs); (b) the distribution of costs and benefits among different groups; (c) the distribution of regional economic activity among different groups; and (d) uncertainty and risk.
8. Prepare an analysis of the Preferred Alternative consistent with directions provided by the *Principles and Guidelines* for the National Economic Development and Regional Economic Development accounts. This effort should parallel, if not build on, the NED, RED, and related analyses the Bureau of Reclamation and Washington Department of Ecology recently completed in conjunction with the development of a programmatic environmental impact statement for the Integrated Water Resource Management Plan for the Yakima River Basin.[13]
8. Clearly explain criteria used to evaluate the socioeconomic differences among the different alternatives and the process used to apply the criteria and select the Preferred Alternative.

B. The PSMP DEIS Presents an Incomplete and Biased Picture of the Preferred Alternative's Socioeconomic Effects

The preceding sections describe in general terms the failure of the PSMP DEIS to satisfy the Corps' obligation to provide a description of the socioeconomic effects of the PSMP "to the fullest extent possible." This section identifies specific information that the PSMP DEIS ignored. It also explains the bias resulting from this omission, with the PSMP DEIS favoring dredging over alternative methods for managing sediment and the navigation industry over other transportation alternatives. This section also demonstrates that a more thorough and accurate analysis than what is in the DEIS likely would show that the costs of the PSMP outweigh its benefits.

1. The PSMP DEIS Presents an Incomplete Picture of the Preferred Alternative

The PSMP DEIS not only fails to take a "hard look" at all the available, relevant information regarding all aspects of the PSMP's socioeconomic effects, it closes its eyes to this information. In particular, it fails to utilize extensive, readily available information regarding the economic benefits and costs of the Preferred Alternative, and its impacts on the distribution of economic activity between the barge industry and its competitors in the rail and trucking industries. This failure occurs despite the Corp's having available to it not just a large amount of relevant information but also a detailed prescription, grounded in the *Principles and Guidelines*, for how to utilize this information to assess the socioeconomic effects.

[13] *See* http://www.usbr.gov/pn/programs/yrbwep/reports/fouraccounts.pdf; and http://www.usbr.gov/pn/programs/yrbwep/reports/DPEIS/DPEIS.pdf.

a. The PSMP DEIS Presents an Incomplete and Biased Description of the Preferred Alternative's Benefits and Costs

The socioeconomic sections of the PSMP DEIS should compare the benefits of each alternative against its costs to determine the net benefit (net cost) and demonstrate that, unless other factors outweigh the objective of maximizing net national economic benefit, the Preferred Alternative selected by the Corps has the greatest net benefit (lowest net cost). They do neither. This omission has important consequences, insofar as even a brief review of the available information suggests that the Preferred Alternative's costs outweigh its benefits. As a result, the DEIS presents information and selects a Preferred Alternative biased in favor of dredging and other activities that require taxpayer support and subsidies to the barge industry.

The *Principles and Guidelines* explains that, "The basic economic benefit of a navigation project is the reduction in the value of resources required to transport commodities." (p. 49) The benefit can materialize through reduction in the cost of transporting goods that would (a) use the waterway with or without the PSMP; (b) use another, more costly mode without the PSMP; or (c) experience an origin-destination shift with the PSMP. The PSMP DEIS, however, does not substantiate that the Preferred Alternative would yield any of these reductions in the cost of transporting goods. Instead, it makes only general statements, such as these, that suggest the benefits, if any, of the Preferred Alternative would be limited:

> "Modifying flows to flush sediments (drawdown) would require substantial changes in reservoir operations that would temporarily preclude most barge navigation in the reservoirs where and while drawdown was occurring. This would be a temporary adverse impact on commercial and recreational navigation. Normal operating water levels would be restored following the implementation of the drawdown or flushing measure, which would allow navigation to resume. Some shipments would likely shift to other modes (rail, truck), which could adversely affect the capacity of the rail or highway system. However, these measures would have a long-term beneficial effect on navigation, by improving the navigation channel. Changes to the ways in which barge tows are operated could affect the costs of barge shipping, as well as recreational vessels operating in the vicinity of the tows." (p. 4-33)

This language reveals that the Corps apparently does not know with certainty if the Preferred Alternative would yield any economic benefits whatsoever. Instead, although it makes the general statement that improving the navigation channel, through dredging and other activities included in the Preferred Alternative, would have a beneficial effect on navigation, the most it says about the economic consequences of these actions is that they "could affect" the costs of shipping goods via the waterway. Or not. It is impossible to tell from the information presented in the DEIS. Some of these actions would have a "temporary adverse impact on commercial and recreational navigation" by precluding most barge traffic in some reservoirs. Although this disruption likely would cause some cargo that otherwise would be shipped by barge to be shipped, instead, by rail or truck, the PSMP DEIS does not say that this shift would have any effect on shipping costs. Instead, it says that the shift "could adversely affect"—the Corps apparently does not know for sure—"the capacity of the rail or highway system." The DEIS makes no attempt to quantify these potential costs and benefits, or the uncertainty attached to its general projections.

The *Principles and Guidelines* also explains that the assessment of the costs of a planned program, such as the Preferred Alternative, should examine "the opportunity costs of resources used in implementing the plan. These adverse effects include: Implementation outlays, associated costs,

and other direct costs." (p. 8) The socioeconomic sections of the PSMP DEIS, however, provide no information about the Preferred Alternative's implementation outlays, associated costs, or other direct costs.

This lack of information in the DEIS does not stem from a dearth of relevant data and studies. The Corps itself has generated extensive information about the benefits and costs of maintaining the navigation channel and supporting barge traffic. In particular, the Corps' records about its past operations should enable it to provide a reasonably accurate description of the dredging costs under the Preferred Alternative, as well as the costs of maintaining and operating the locks at the four dams on the lower Snake River. For example, the PSMP DEIS shows that, between 1982 and 2006, the Corps dredged about 4 million cubic yards of material above Lower Granite Dam, or more than 150,000 cubic yards per year, on average.[14] This volume translates into an annualized dredging cost of at least $2 million, in the dollars of 2005-06.[15] This level of costs, exclusive of inflation, should carry forward, even increase, insofar as the PSMP DEIS anticipates that wildfires and other events likely will increase sediment delivery to the Lower Granite pool. Increases seem likely, as evidenced by the Corps' decision, three months after publishing the DEIS, in which it stated an immediate need to dredge 421,675 cubic yards above Lower Granite Dam, to seek a permit to now dredge 491,043 cubic yards. The costs would be even higher, measured in real terms, if the nominal costs of dredging rise faster than general inflation.

These dredging costs, alone, likely will exceed the economic benefits, if any, of the Preferred Alternative. Economic benefits would materialize to the extent that the Preferred Alternative would reduce the transportation costs of shipping grain. In the costs and benefit of dredging, one must measure the true reduction in costs to the national economy, not the reduction in barge rates that reflect a subsidy from taxpayers. Extensive research provides insights into the true benefits (or costs) of maintaining the navigation channel in the LSRP. Some of this has focused on the competition to barge traffic from rail and trucks in this region and how the competition affects the potential benefits and costs of actions that would maintain or, alternatively, cease barge traffic along the Lower Snake River. A study completed in 2003, for example, found that, if the navigation system on the lower Snake River were closed, grain shippers would, on average, incur additional costs of about $1–2 million per million tons of grain. In recent years, the Port of Lewiston has shipped about 500,000 tons of grain per year.[16] These numbers, combined, indicate that, if the tonnage remains at this level, grain shippers would incur additional costs of $0.5–1.0 million per year, if they were unable to ship by barge. The avoidance of these costs represents the Preferred Alternative's primary economic benefit. This benefit, $0.5–1.0 million per year, however, falls short of the annualized cost of dredging of at least $2 million.

---

[14] PSMP DEIS pp. 1-10 and 1-11.

[15] The Corps reported dredging costs of $12.75 per cubic yard. Barker, E. 2005. "Dredging to begin next week," *Lewiston Morning Tribune*. 12 December. Retrieved 13 March 2013 from http://lmtribune.com/northwest/article_0b952047-4a7e-5808-b30f-f1fd39e15296.html.

[16] Port of Lewiston. 2013. "Shipping Reports." Retrieved 11 February 2013 from http://www.portoflewiston.com/wordpress/?page_id=69.

The dredging costs likely also will outweigh the overall benefits for all commodities shipped through the Lower Granite locks. In 2009, about 1.2 million tons of freight passed through these locks (DEIS, Table 3-13). If the savings per ton to shippers for other commodities are similar to those for grain, the total annual benefits of maintaining the navigation channel would total about $1.2–2.4 million for the same amount of freight barged in 2009, with the midpoint of this range, $1.6 million, falling well below the estimated annualized dredging cost. Information presented below indicates that the gap between the dredging costs and the benefits to shippers probably will be even greater, because the amount shipped by barge likely will fall and dredging costs likely will rise.

Market data support the conclusion that maintaining the navigation channel through the Lower Granite Pool is especially inefficient. Table 3-13 of the PSMP DEIS shows that tonnage through the Lower Granite locks fell from 2.3 million tons in 1994 to 1.2 million tons in 2009. Most of this decline occurred prior to the onset of the Great Recession and reflects structural trends. The overall decline during this period, 47 percent, was considerably greater than the declines at the dams down river: Little Goose (30 percent), Lower Monumental (31 percent) and Ice Harbor (33 percent). The DEIS presents no information to substantiate an expectation that the downward trend will not continue. If tonnage continues to decline in the future, potential benefits from maintaining the navigation channel, all else equal, will decline as well.

Further reductions in shipments through the Lower Granite locks seem likely. Many shippers have good substitutes for barge transportation, and, at the margin, the incremental costs of shifting to rail or truck transport are small, or even negative. Rail and truck transport already is competitive with barge transport for many grain producers. The 2003 study found that more than one-third of the grain produced in the counties tributary to Lower Granite pool is transported to market by rail or truck.[17]

Competition to the barge industry along the Lower Snake River from rail has increased in recent years, drawing freight away from barges. A major shift occurred in 2002, with the completion of a unit-train/shuttle loading facility at Ritzville. An assessment of the facility's impact concluded, "The facility at Ritzville immediately began to compete for grain volume that previously was shipped…to the river."[18] The authors observed further that, although truck-barge and rail shipping rates for grain north of Ritzville were comparable prior to the facility's completion, truck-barge rates subsequently grew almost 10 cents higher. The percentage of grain shipped from this area via truck-barge fell from 94 percent in 2001 to 65 percent in 2005, as the amount shipped by rail via Ritzville rose from about 3 percent to 30 percent. In their market analysis for further investments in the rail system, the authors offered this explanation for why grain producers and others are investing in rail-system upgrades:

> "The principal and critical constraint on the barge system is a need for continued dredging at the entrances to some terminals and in some parts of the navigation channel. The U.S. Army Corps of

[17] BST Associates. 2003. p. 42.

[18] Casavant, K. and E. Jessup. 2006. Palouse River and Coulee City Railroad: CW Line Market Assessment. Washington State Department of Transportation Office of Freight Strategy and Policy. March. Retrieved 12 March 2013 from http://www.wsdot.wa.gov/NR/rdonlyres/9847F8D2-33B4-4B34-83D8-B34F0ACC70DC/0/PCCMarketAnalysis_Revised_March3.pdf.

> Engineers has a plan to provide the required dredging, costing about $2.1 to $4.9 million per year over a 70+ year period, and this plan was partially implemented this winter, due to a compromise between the Army Corps of Engineers and the Tribes/environmental interests. Without dredging, the barges had, in some cases, been loaded light (as much as 35% light), decreasing efficiency and increasing per unit costs to shippers. Shippers and ports had stepped in and contracted for private dredging until this compromise was reached. The future status of this effort remains uncertain.
>
> "…The uncertainty surrounding both the halt in annual dredging and the renewed possibility (though extremely low) of breaching of some dams has a direct effect on the CW line. First, the competitive position of the short line railroad is greatly enhanced if either of these actions continues. Secondly, in the extreme case, the need for service from the line is greatly increased since loss of dredging or implementation of a river draw down will both necessitate hauling grains and products to the Tri-City area, if barge is to be accessed and efficiently used in the future. If barge is no longer competitive, then rail movement the full distance to the port becomes necessary…." (pp. 31-32)

Additional expansion of competition from rail is underway. The development of the McCoy shuttle train loader facility near Oakesdale, expected to be operational for the 2013 harvest, will give producers a strong competitive option to trucking grain for shipment by barge. In all likelihood, the facility will result in diverting to rail grain that otherwise would be shipped by barge. The DEIS does not discuss—or even mention—the uncertainty this new development creates for the ability of the Preferred Alternative to generate navigation-related economic benefits.

The potential economic benefits of the McCoy facility and related investments in the rail system are substantial, as the surrounding region produces almost one-third of Washington's exported wheat. The loading facility offers transportation savings and other benefits even without improvements to the rail line serving it. With the improvements, the benefits would increase, as illustrated by a benefit-cost analysis that found the project would yield these benefits, discounted at 3 percent per year over a 20-year period:[19], [20]

- Net transportation savings of $72.3 million
- Net road damage savings of $13.8 million
- Net safety savings of $7.5 million
- Net reduction in CO2 emissions of $519 thousand
- Total net benefits of $67.4 million"

The Port of Whitman County, which supports facilities for both rail and water transportation, has offered this summary assessment of the economic benefits of diverting grain from barge to rail:[21]

> "The greatest benefits from the project are the net transportation savings from reduced trucking of grain. With the construction of the [McCoy] Shuttle Loader Facility, the projected number of truck trips to the rail loading facility increases as a result of additional bushels being hauled to the shuttle

[19] Port of Whitman County. 2012. *P&L Shortline Railroad Bridge Replacement and Shuttle Loader: TIGER Discretionary Grant*. Retrieved 12 March 2013 from http://www.portwhitman.com/Narrative%20Final.pdf.

[20] Washington State Department of Transportation, S. Peterson, and J. Tee. 2012. *Benefit-Cost Analysis Summary.* □□□□□□□□□□□□□□□□□□□□□□□□. Retrieved 11 February 2013 from http://www.portwhitman.com/Benefit-Cost%20Analysis.pdf.

[21] Port of Whitman. 2012. *P&L Shortline Railroad Bridge Replacement and Shuttle Loader: TIGER Discretionary Grant*. Retrieved 12 March 2013 from http://www.portwhitman.com/Narrative%20Final.pdf.

> loading facility from farm storage and other commercial grain storage and handling facilities, rather than being hauled to the river for barge transport. This reduces the truck-to-barge mileage. A projected 6,500,000 bushels of wheat will be loaded and shipped directly from storage facilities along the P&L shortline to the private sector loading facility. Another 9,868,000 bushels will be trucked to the loading facility from an average distance of 50 miles round trip. Without the project, all 16,368,000 bushels will be trucked an average of 150 miles round trip to the port at Central Ferry. This project reduces annual truck miles by 2,295,199 and saves 217,431 gallons of fuel, resulting in a net CO2 reduction of 1,259 Mtons." (p. 17)

Barge terminals down river also compete with those in the Lower Granite pool. In addition, an increasing portion of grain is being transported in larger trucks and, if this trend continues, it likely would make truck transport even more competitive.[22]

A shift away from barge transport originating in Lewiston also would have associated benefits for some parts of the road system. The 2003 study observes:

> "The road systems in Idaho, Montana, and North Dakota should also benefit, as the long- distance truck moves to Lewiston are eliminated in favor of rail transport to export elevators. The wear and damage to roadways caused by loaded trucks will be substantially reduced for these states. In contrast, the highway maintenance costs in Washington would increase slightly." (p. 69)

> "Idaho accounts for 49.2% of the grain flowing into the Lower Granite Pool, with most of the grain originating in the area around Lewiston and Southwest Idaho. Washington accounts for 27.0%, with most of the grain originating in Whitman County. The remaining grain originates in Montana (14.2%), North Dakota (6.9%), Oregon (2.5%) and Utah (0.3%)." (p. 44)

The PSMP DEIS presents none of this information indicating that the economic benefits from maintaining the navigation channel through the Lower Granite Pool are uncertain and, if they exist currently, are likely to decline in future years. It also presents no information about how past maintenance of the navigation channel has had adverse, indirect impacts on the rail system. Expenditure of taxpayers' dollars to maintain the channel means that barge operators do not bear the full, direct cost of shipping freight by barge. In other words, barge shipments are subsidized. Some of the subsidy materializes as the channel is dredged, others occur as the Corps maintains the locks and incurs other costs, such as responding to the impacts of its activities on fish. Additional subsidy materializes outside the LSRP, for example, as tribal members, recreationists, local communities, and others are harmed without compensation by the adverse impacts of activities related to the navigation channel and barge traffic on fish and wildlife.

Subsidies to the navigation system have enabled the barge lines to transport grain and other products at prices that do not cover the system's full costs. For many years, some shippers realized economic benefits from these lower prices, both as they shipped products by barge and as competition between barge and rail induced railroads to keep their prices lower than would exist absent the navigation subsidies. Over the past couple of decades, however, the hidden costs and unsustainability of these subsidized prices have become apparent as railroads, struggling to compete with the subsidized prices of barge shipments, cut investments in and maintenance of rail lines. In some cases, the lines were abandoned or sold to the state, which has had to make substantial investments to keep them running. The DEIS fails to account for any of these costs.

[22] BST Associates. 2003. p. 11.

In sum, this discussion reveals that information available to the Corps but not included in the DEIS suggests strongly that the socioeconomic benefits of the Preferred Alternative fall far short of the costs. By not expressing, studying, and analyzing this information, the DEIS fails to "take a hard look" at a critically important aspect of the PSMP's economic consequences. The Corps must re-work the DEIS and fully examine the net benefits (net costs) of each alternative if it is to satisfy its obligation to provide good faith analysis and sufficient information to allow a firm basis for weighing the risks and benefits of the agency's Preferred Alternative.

b. The PSMP DEIS Presents an Incomplete and Biased Description of the Preferred Alternative's Impacts on Regional Economic Activity

The PSMP DEIS summarizes the Preferred Alternative's impacts on economic activity with this observation: "Maintaining the navigation channel would maintain the flow of commodities thereby maintaining existing related conditions in employment and income in related economic sectors." (p. 4-33) It provides no other information, or analysis, of the impacts.

This treatment of the Preferred Alternative's impacts on the regional distribution of economic activity violates a fundamental standard of impact analysis. This standard recognizes that impact analysis requires defining two scenarios, one with and the other without the Preferred Alternative, and describing the differences between them to represent the alternative's impact. The *Principles and Guidelines* states, for example:

> **"Section III — Summary of the Planning Process** … **1.3.6 Evaluation of Effects** … (b) *Assessment.* Assessment is the process of measuring or estimating the effects of an alternative plan. Assessment determines the difference between without-plan and with-plan conditions for each of the categories of effects." (pp. 1-2)

Because of the failure to conduct a with-vs.-without analysis, it is impossible to know, from the information provided in the PSMP DEIS, how the Preferred Alternative would affect economic activity. Specifically, it is impossible to know if income and jobs would go up or down, or which workers in which industries would be affected.

The DEIS fails to show how maintaining the navigation channel, through implementation of the Preferred Alternative, would "maintain the flow of commodities" by barge. The tonnage barged on the Lower Snake River has been declining over many years and the DEIS does not demonstrate how the Preferred Alternative would arrest this decline. Moreover, it does not discuss, let alone analyze, the potential effects on the flow of commodities by barge of the recent and planned investments in the rail system that likely will draw even more freight away from the barge system in the future.

The DEIS also fails to substantiate its assertion that by maintaining the navigation channel, the Preferred Alternative would maintain existing conditions in employment and income in economic sectors related to navigation and the barge industry. If maintaining the navigation channel is unable to maintain the current flow of commodities by barge, in the face of long-established downward trends and increasing competition from rail, jobs and incomes associated with the barge industry likely will decline.

Conversely, if subsidies to the barge industry are sufficiently large to enable it to maintain the flow of commodities, then the jobs and incomes associated with it will come at the expense of jobs and incomes associated with the barge industry's competitors. The discussion above

demonstrates that, if barge transport of cargo through the Port of Lewiston were not available, the cargo would be shipped via rail or truck or through a barge terminal down river. If successful in maintaining the flow of commodities by barge, implementation of the Preferred Alternative would preclude workers associated with transport by rail or truck or through down river barge terminals from being employed and earning income. The PSMP DEIS provides no information about the Preferred Alternative's potential impacts on these jobs and incomes. Indeed, it provides no quantitative information about any jobs or incomes. Nor does it account for changes underway in the competition for freight that indicate existing conditions in employment and income in sectors related to navigation and the barge industry likely will change, perhaps dramatically, regardless of the Corps' approach for managing sediment in the LSRP. Hence, it is impossible to determine, from the PSMP DEIS what the impact the Preferred Alternative would have on the regional distribution of economic activity. The document simply does not address the issue.

2. The PSMP DEIS Presents a Biased Picture of the Preferred Alternative

The incomplete socioeconomic picture in the PSMP DEIS is a biased picture. The bias emerges as, out of the void created by the absence of socioeconomic data or analysis, the PSMP DEIS avoids communicating the negative socioeconomic effects that would accompany implementation of the Preferred Alternative. The information presented above indicates that these negative effects likely would offset much, if not all, of the positive effects, with costs exceeding benefits and jobs and income in the barge industry coming at the expense of jobs and income in the rail and truck industries. The incomplete picture thus allows the PSMP DEIS to portray the Preferred Alternative as more desirable than taking no action, or pursuing other alternatives that would avoid some or all of these costs, when, from a socioeconomics perspective, the reverse likely is true.

C. Summary

The socioeconomic elements of the PSMP DEIS fail completely to satisfy the full suite of applicable analytical standards: those required by NEPA, the widely accepted professional standards applicable to this setting, and agency-specific standards. This failure does not stem from a lack of relevant data and other information. There is a wealth of data, much of it generated by the Corps, itself, and studies of the economics of navigation are numerous. Instead, the failure stems from an analytical black hole. The document contains no analysis. As a result, the PSMP DEIS provides no socioeconomic basis for the selection of the Preferred Alternative, nor does it come close providing the public with the information it needs to judge the reasonableness of that decision from a socioeconomics perspective.

The Corps' selection of the Preferred Alternative, which would re-start suspended dredging activities and initiate the construction of structures to enable continued barge traffic in the Lower Snake River ignores substantial information indicating that this approach to sediment management likely would generate socioeconomic costs that exceed the benefits. Information included in the PSMP DEIS supports the conclusion that the dredging costs, alone, likely would exceed the transportation-cost savings, if any, that would result from future shipments of grain from the Lower Granite Pool. For example, if the tonnage shipped into and out of the Lower Granite Pool remains at current levels, maintenance of the navigation channel would generate shipping-cost savings for grain producers of $0.5–1.0 million per year. This benefit, however, falls short of the annualized cost of dredging, at least $2 million. The dredging costs also likely

will outweigh the transportation-cost savings, if any, for all freight shipped through the Lower Granit locks. Accounting for the additional costs of maintenance of the locks and construction of structures likely would show the overall costs are even greater than the potential transportation-cost savings, if any.

Information excluded from the PSMP DEIS supports the conclusion that the Preferred Alternative's net costs would be even larger, insofar as the tonnage shipped by barge likely will decrease, as will the benefits of maintaining the navigation channel. A new rail-loading facility at Ritzville began siphoning grain shipments away from the barge system as soon as it was completed in 2002, so that the percentage of the grain produced in the surrounding area and shipped by barge fell from 94 percent in 2001 to 65 percent in 2005. Similar investments to be completed soon at McCoy likely will have similar effects, further reducing barge shipments.

To rectify its failure to produce an unbiased DEIS that takes a take a "hard look" at the socioeconomic consequences of managing sediment in the LSRP, the Corps must start over. It must define a baseline scenario that describes what the world would look like without federal action, describe in detail how each alternative would make the world different, and determine the benefits and costs attributable to each alternative, as well the changes in economic activity and changes in uncertainty and risk. With this detailed, comparative information in hand, it then must explain which of the alternatives, from a socioeconomics perspective, is the Preferred Alternative.

0122_CWA_AndersonT

9685 Aquatic resources; threatened and endangered species (aquatic)

From: Vicki Anderson
To: PSMP
Subject: dredging
Date: Wednesday, April 10, 2013 12:17:41 PM

WITH ENDANGERED SALMON AND STEELHEAD DREDGING WOULD BE A DISASTER. THIS YEAR ALONE THE RUNS ARE AT A MINIMUM. THE SILT WOULD DO GREAT HARM TO WHAT FEW FISH WILL SPAWN THIS YEAR. THE COST IS PROHIBITIVE FOR TAX PAYERS AS WELL. DREDGING COSTS ARE AN ONGOING COST OF 3.2 MILLION PER YEAR. AT CURRENT SHIPPING RATES THIS AMOUNTS TO 18,900 DOLLARS PER BARGE LEAVING THE PORT OF LEWISTON. HOW RIDICULOUS!!! RAIL IS ALL THAT IS NEEDED, AND WOULD BE MORE EFFICIENT. PLEASE DON'T MAKE THE MISTAKE OF DREDGING AND RUIN WHAT LITTLE FISHING WE HAVE LEFT.---TOM ANDERSON--

9687 Socioeconomics; rail

9686 Costs and funding

0123_CWA_Babson

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9688/ 9710/ 9711 Public Hearing Request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

9690 Water quality, and sediment quality; sediment quality

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Neil Babson

Neil Babson
1971 SE Locust Ave.
Portland OR. 97214

N. Babson
1971 SE. Locust. Ave.
Portland OR. 97214

PORTLAND OR 972
29 APR 2013 PM 5 L

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA.
99362-1876

9936218760 1

0124_CWA_Burke

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9713 Water quality, and sediment quality; sediment quality

9712 / 95[illegible] Public Hearing Request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Michael A. Burke

M. Burke

29 APR 2013 PM 5 L

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third ave.,
Walla Walla WA
99362-1876

9936218760 1

0125_CWA_Corder

From: Sierra Club on behalf of Zeke Corder
To: PSMP
Subject: Please carefully consider dredging the Lower Snake
Date: Thursday, May 02, 2013 8:37:24 AM

May 2, 2013

Army Corps of Engineers

Dear of Engineers,

In these times of limited federal dollars, it's absurd for taxpayers to subsidize barging when the same cargo could be more efficiently transported on existing railroad. The Corps should conduct an honest cost-benefit analysis that determines the benefits of this proposal outweigh the costs.

The effects of dredging, including dumping dredge spoils into the reservoirs, may threaten Endangered Species Act-listed stocks of salmon and steelhead, which are in the system year-round.

Increased sediment load due to large forest fires - a result of climate change - will increase the flood risk to the city of Lewiston and would require an endless and unsustainable cycle of dredging at an ongoing cost to taxpayers.

Please do a cost benefit analysis to ensure that the benefits of this proposal outweigh such steep costs.

Sincerely,

Mr. Zeke Corder
1397 N Kolnes Ave
Kuna, ID 83634-2965
(208) 841-8927

9717 Costs and funding

9718 Aquatic resources; threatened and endangered species (aquatic)

9719 Hydrology and sediment; watershed sediment production

0126_CWA_CreamRidgeMorgans

From: Cary and Leigh Ann Newman
To: PSMP
Subject: I support and am for the dredging on the Snake River
Date: Thursday, April 11, 2013 8:03:37 AM

9720 General project support

I support and am for the planned dredging on the Snake River and the following statement from the Lewiston Tribune,

"The spoils would come from the more than 470,000 cubic yards of sediment the corps has proposed to dredge from an area near the confluence of the Snake and Clearwater rivers. If the dredging proposal is approved, the agency wants to dump the sand and silt 23 miles west of the valley near Knoxway Canyon, where it would be used to create shallow water habitat for salmon and steelhead."

Cary Newman

Lenore Idaho

--
Cream Ridge Morgans
Stock for sale and stallion service.
www.creamridgemorgans.com

0127_CWA_Edeline

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9712 / 9723 / 9724 Public Hearing Request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

9722 Water quality, and sediment quality; sediment quality

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Kevin T. Edeline
3030 SE Powe #27
Portland, OR. 97214

K. Edeline
3030 SE Pine #27
Portland OR. 97214

PORTLAND OR 970
29 APR 2013 PM 2 1

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.,
Walla Walla WA.
99362-1876

9336218760 1

0128_CWA_EPA_Region10_EnvReview_SegMgt

From:	Shelin, Sandy L NWW
To:	Grass, Charlene G (Contractor) NWW
Subject:	FW: EPA Comment Letter PN # CENWW-PM-PD-EC 13-01, Lower Snake and Clearwater Rivers Winter Dredging 2013-2014 (UNCLASSIFIED)
Date:	Thursday, May 02, 2013 1:06:42 PM
Attachments:	CENWW-PM-PD-EC 13-01 Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2013-2014 WA and ID.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Charlene,

Please add this to our comment letter collection for the PSMP/EIS. This is responding to the Corps' public notice and Clean Water Act compliance.

Sandy

From: Barton, Justine [mailto:Barton.Justine@epa.gov]
Sent: Thursday, May 02, 2013 11:49 AM
To: Shelin, Sandy L NWW
Cc: Laura Inouye (LINO461@ecy.wa.gov); Celia Barton (Celia.Barton@dnr.wa.gov); Warner, Lauran C NWS; Diane Driscoll; Chris Warren (Chris_Warren@fws.gov); DeGering, Tracy
Subject: EPA Comment Letter PN # CENWW-PM-PD-EC 13-01, Lower Snake and Clearwater Rivers Winter Dredging 2013-2014

Hi Sandy -- Attached please find our comment letter and 2 attachments for the referenced notice. Thanks for your quick responses to my questions these past couple of weeks! Let me or Tracy know if you have any questions regarding our comments. JB

Justine Barton

U.S Environmental Protection Agency, Region 10

1200 Sixth Ave., Suite 900, ETPA-088

Seattle, WA 98101

206.553.6051

barton.justine@epa.gov

Classification: UNCLASSIFIED
Caveats: NONE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS,
TRIBAL AND PUBLIC
AFFAIRS

May 2, 2013

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, ATTN. Sandra Shelin
CENWW-PM-PD-EC
201 N. 3rd Avenue
Walla Walla, Washington 99362-1876

Re: Comments on Public Notice # CENWW-PM-PD-EC 13-01, Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2013-2014, Washington and Idaho.

Dear Ms Shelin:

Thank you for the comment period extension on the referenced public notice. Last month the EPA also provided extensive comments on the draft Lower Snake River Programmatic Sediment Management Plan EIS that provides both background and context for this project. The EPA acknowledges the potential need for dredging as a management tool and part of an overall sediment management strategy. However, we anticipate that interagency work on long-term sediment reduction measures and an active adaptive management process could result in a significantly reduced need for dredging and associated disposal in and around the Snake and Clearwater Rivers. We hope the Walla Walla District Corps will continue to be an active leader and convener in those management efforts.

In the referenced notice, the Walla Walla District Corps of Engineers proposes to perform almost 500,000 cubic yards (cy) of maintenance dredging at four locations on the lower Snake and Clearwater Rivers. This material has accumulated since dredging last occurred in winter 2005/2006. The proposed locations include the Ice Harbor navigation lock approach, berths at the Ports of Clarkston and Lewiston, and the Federal navigation channel adjacent to the two ports at the confluence of the Snake and Clearwater Rivers. The Corps' dredging and disposal would occur during the winter 2013-2014 in-water work window, from December 15 through March 1. Dredged material disposal is proposed at an in-water location in Lower Granite Reservoir, at RM 116, near Knoxway Canyon, with the goal of creating a 7.3 acre shallow water habitat bench beneficial for juvenile fall Chinook salmon. The material would overall occupy a 26 acre footprint along about 3,500 linear feet of reservoir shoreline.

Our comments on the public notice fall into two main areas: review of compliance with Clean Water Act 404(b)(1) guidelines (Guidelines), and dredged material placement specifics, including the characterization of the dredged material proposed for in-water placement. Project details are taken from both the public notice, as well as environmental documentation from appendices associated with the Programmatic Sediment Management Plan DEIS we reviewed last month.

Compliance with Clean Water Act 404(b)(1) Guidelines.
Section 230.10 of the Guidelines contains the four principle requirements for compliance. Failure to *"clearly demonstrate"* that there is no *"practicable alternative to the proposed discharge which would*

9697 Dredged material disposal

have less adverse impact on the aquatic ecosystem", in accordance with Section 230.10(a), renders a project noncompliant with the Guidelines. Similarly, if a proposal contains insufficient information to determine compliance, the Guidelines require that no discharge be authorized. The EPA acknowledges that, under 33 CFR Part 335.2, "*the Corps does not issue itself a CWA permit to authorize Corps discharges of dredged material or fill material into U.S. waters, but does apply the 404(b)(1) guidelines*..." (emphasis added). While a 404 permit may not be required in this particular case, it is still the Corps' responsibility to demonstrate compliance with the Guidelines. The EPA reviewed the 404(b)(1) analysis associated with the referenced dredging and disposal as part of the review of the DEIS (Appendix L). The purpose of the immediate proposed maintenance dredging is to restore the authorized depth of the Federal navigation channel and to remove sediment from adjacent port areas. The EPA often supports in-water disposal/placement of dredged material; however, the Corps should more rigorously document that in-water disposal for the immediate maintenance action complies with the Guidelines. Our detailed comments on compliance with the Guidelines are included in Attachment 1, and are organized into three main areas, including alternatives analysis, project purpose and in-water disposal/placement for habitat, and definition of practicability.

Dredged Material Management Program Sediment Characterization.

The EPA has very recently been involved in an interagency review, via the Dredged Material Management Program, of existing sediment quality characterization information for the proposed dredging prism. Until recently, the Walla Walla District had not provided necessary information on the most recent August 2011 characterization efforts, and thus this analysis lagged behind the draft EIS and current public notice review process. Recent work is being coordinated by the Seattle District Corps' Dredged Material Management Office, on behalf of the Walla Walla District. A "Next Steps" memo was provided to Walla Walla District by Lauran Warner on behalf of the DMMP agencies (the DMMP agencies include the Corps of Engineers, EPA Region 10, and the Washington State Departments of Ecology and Natural Resources). This memo, dated April 23, 2013, is included as Attachment 2. It is based on review of older information and the August 2011 findings (which were provided April 1, 2013), and outlines a DMMP proposal for additional information gathering. This information is necessary for determining whether the proposed dredged material is suitable for beneficial use and/or open-water placement. We understand that Walla Walla District is working on a draft Sampling and Analysis plan, and will be gathering the additional necessary information. We look forward to reviewing a draft Sampling and Analysis Plan in the near future. Until this information has been collected and provided in a comprehensive draft report, we do not agree with the Corps' contention that the material proposed for placement is appropriate for use at Knoxway Canyon or any other unconfined open-water disposal option.

9698 Dredged material disposal

Dredging/Placement and Water Quality Concerns.

The EPA is concerned about potential turbidity effects on water quality both during dredging and placement, especially with the flat-top barge/bulldozer disposal option, and during reworking of placed sediments. Final underwater regrading of the material into a gradually sloping bench, and placing the final 10 foot thick dressing of sandy material along a 3,500 foot long linear segment of the reservoir may prove to be particularly difficult to manage. The Corps' 2006 water quality monitoring report ("Water Quality Final Report, FY 06 Lower Snake River Dredging Project, Manson Construction Company, USACE Walla Walla District, submitted by Dixon Marine Services Inc, dated May 12, 2006) states that during the 851 hours of dredging in the reach near Port of Clarkston, the project was in compliance only 64% of the time with an average turbidity of 5.84 NTU over background (at a deep station 300+ feet downstream). Due to the "monitoring zone" monitoring set up, this station was likely more than 300 feet

downstream, with the deep station 600+ feet downstream in compliance 85% of the time. The report states that dredging operations were consistently halted during this project phase to allow turbidity levels to decrease to within specified limits.

In addition, the water quality monitoring report states that, "During the final phase of the dredging operation (March 3, 2006), the main dredge *Vulcan* was relocated to the disposal area, specifically to reshape the disposed material. This activity was closely monitored for elevated turbidity, and both compliance stations did signal alarms for a long series of elevated turbidity, ceasing operation in excess of 10 hours. The threshold for this operation was raised to 75 NTU, which was implemented on March 3, 2006." While it may be decided that the short-term turbidity effects are reasonable and unavoidable in order to accomplish the final shaping/dressing of the benches, these effects should be anticipated, past actual results should be clearly summarized and best management practices discussed with water quality agencies, especially the Washington Department of Ecology. How long will turbidity remain relatively high, how far is turbidity likely to be dispersed and how will turbidity issues be better addressed this dredging/placement cycle?

For further information/coordination on our 404(b)(1) analysis comments please contact Tracy DeGering, degering.tracy@epa.gov, 208-378-5756. For further information/coordination our review of sediment characterization information and project dredging and placement specifics, please contact Justine Barton, barton.justine@epa.gov, 206-553-6051.

Sincerely,

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Attachments

cc. Washington Department of Ecology – Laura Inouye
Washington Department of Natural Resources – Celia Barton
Seattle District Corps of Engineers – Lauran Warner
NOAA/NMFS – Diane Driscoll
USFWS – Mr. Chris Warren

9700 Dredged material disposal

Attachment 1: Compliance with Clean Water Act 404(b)(1) Guidelines.

Alternatives Analysis. Based on the available information, we do not believe the proposed disposal action (placement at the Knoxway Canyon site) has been clearly demonstrated to be the least environmentally damaging practicable alternative. The identification of practicable alternatives to be analyzed is constrained only by the definition of a practicable alternative (as further discussed below). Pursuant to 40 CFR Section 230.10(a), an alternatives analysis is conducted to identify practicable alternatives to a proposed discharge. An alternative is practicable if it is available and capable of being done and would achieve the overall project purpose. Practicable alternatives with fewer adverse impacts are presumed to exist for non-water dependant activities, unless "*clearly demonstrated otherwise.*" The environmental impacts of the various practicable alternatives are then compared so that the Corps can ensure it is authorizing only the practicable alternative which generates the least environmental damage, the LEDPA. Except as permitted under Section 404(b)(2), the Guidelines prohibit the authorization of any alternative that is not the LEDPA.

Both the project description in the DEIS Appendix H and the Evaluation in Appendix L acknowledge that dredged material has previously been placed in uplands, and that dredged material could be discharged in upland areas or in-water. As such, it is our understanding that the proposed discharge resulting from the immediate maintenance action is not a water dependent activity. The disposal of dredged material does not require access or proximity to, or siting within, a special aquatic site to fulfill its basic purpose. In summary, the Corps needs to more clearly demonstrate selection of the LEDPA (augmenting Appendix L), and we recommend the Corps clearly address the alternatives analysis for future disposal of dredged material as well as the cumulative impacts from continued disposal of dredged material, should in-water disposal be the LEDPA.

Project Purpose and In-Water Disposal/Placement for Habitat. The project purpose does not clearly support in-water disposal. The purpose of the immediate proposed maintenance dredging is to restore the authorized depth of the Federal navigation channel and to remove sediment from adjacent port areas. Reestablishment of the navigation channel is an entirely different purpose than the proposed creation of shallow water habitat. We also understand that dredging may sometimes be necessary in order to achieve the desired 14-foot deep navigation channel. Since dredged material disposal is not a water dependent activity, however, we emphasize that for any proposed discharge of dredged or fill material into waters of the U.S., there must be a very clear purpose and need, and that any final action must always be demonstrated to be the LEDPA. In this specific case, while the immediate dredging action may be real, the need to create shallow water habitat for juvenile salmonids at the proposed disposal site has not been adequately demonstrated. It is our understanding that NMFS considers the construction of "beneficial" shallow habitat benches at Knoxway Canyon experimental. As such, continued monitoring should be required if benches are constructed in the future. Sharing of this information could be part of an interagency adaptive management process that considers and includes new information with a broader sediment management goal and systems approach -- the EPA would be happy to participate in such an interagency management forum. In summary, we recommend that the Corps demonstrate the need to create shallow water habitat for juvenile salmonids at the Knoxway Canyon site, should in-water disposal prove to be the LEDPA.

Definition of Practicability. The Corps has not clearly assessed whether disposal alternatives other than in-water disposal exist. *"An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes"*

9702 Dredged material disposal

9701 Dredged material disposal

[§230.10(a)(2)]. As discussed above, the overall project purpose plays a critical role in determining whether a particular alternative is practicable or not. The consideration of cost, existing technology, and logistics is to determine whether one or more of these factors render an alternative unavailable and/or incapable of being done. This is a very high standard, and an alternative must be demonstrated to be impracticable before it can be excluded from the analysis.

The purpose of consideration of cost is not to compare the cost of different alternatives but to determine whether or not the costs of a specific alternative are so prohibitively high (beyond industry standard) that the alternative is rendered unavailable and incapable of being done. As stated in the preamble to the Guidelines: *"The consideration of cost is not an economic analysis." "The mere fact that an alternative may cost somewhat more does not necessarily mean it is unreasonably expensive and therefore not practicable"* (45 FR 85339).

The consideration of existing technology and logistics are handled similarly to that of cost. For example, an alternative which requires the use of advanced (but existing) technology that is available and capable of being done is a practicable alternative. Similarly, an alternative which is logistically more complex but is still available and capable of being done is a practicable alternative.

Given the above, the EPA has concerns about the Guidelines' consideration of cost in comparison to the Civil Works' federal standard for disposal of dredged material, defined as, *"[T]he least costly alternatives consistent with sound engineering practices and meeting the environmental standards established by the 404(b)(1) evaluation process..."* (emphasis added) (33 CFR 335.7). Since the Guidelines apply to civil works projects, as stated under 33 CFR Part 335.2, alternatives that are practicable, but more expensive, must be considered in determining the LEDPA. Both Appendix H and the Evaluation in Appendix L state that upland disposal is more expensive than in-water disposal, rendering them impracticable.

According to Appendix H, only two upland disposal sites, Joso and Port of Wilma, were identified as alternatives to the proposed in-water disposal. The two alternatives were evaluated separately. The Port of Wilma site, by itself, may not be a practicable disposal site due to its limited capacity to contain the anticipated 500,000 cubic yards of material. The Joso disposal site, alone or in combination with the Port of Wilma site, however, appears to offer ample space and could result in approximately 80 acres of uplands being restored. Cost appears to be the only reason the Joso alternative was eliminated, yet no cost-comparison was provided, nor were ways to further reduce costs discussed. It is not clear whether additional upland sites within the vicinity were considered, and if so, why they were determined not to be practicable. We recommend the Corps compare the environmental impacts of this (and other potential) upland alternatives against the in-water disposal alternative. Once all environmental impacts of the various practicable alternatives have been compared, the Corps can only authorize the practicable alternative which generates the least environmental damage. If the cost of an upland alternative is so prohibitively high, that it renders it unavailable and incapable of being done, this must clearly be demonstrated. At present, the Evaluation in Appendix L does not adequately address how cost, existing technology, and/or logistics render upland alternatives unavailable and/or incapable of being done. In summary, we recommend that a full suite of disposal alternatives (e.g. uplands, in-water and combination thereof, at individual or multiple sites) be more fully evaluated for practicability.

9703 Dredged material disposal

CENWS-OD-ME-DM

MEMORANDUM FOR: NWW **April 23, 2013**

SUBJECT: Dredged Material Management Program, comments on report, "Lower Snake and Clearwater Rivers, Sediment Evaluation Report from Proposed 2013/2014 Channel Maintenance Dredging."

1. **Introduction and Background**. Many thanks for the subject report, received April 2, 2013. The Dredged Material Management Program (DMMP) agencies (including the Corps of Engineers – Seattle District, the Environmental Protection Agency, and Washington State Departments of Ecology and Natural Resources) reviewed the report to evaluate whether the 2011 sediment evaluation provided sufficient information with which to make a determination of suitability for unconfined open-water disposal/placement of the proposed approximately 495,000 cubic yards of dredged material.

   The original objectives of the 2011 sediment characterization included updating the district sediment database for comparison to historical data in support of a Programmatic Sediment Management Plan for the lower Snake River watershed, and to help determine testing requirements for future specific dredging projects. It was not designed as a typical DMMP characterization.

   The DMMP review focused on a) whether a suitability determination for open water disposal could be issued with the information provided in the report, and b) if additional information was necessary to make a determination, to define what additional information would be necessary.

2. **DMMP Findings**. The review found that additional information will be necessary to determine suitability for the majority of the project. This finding is based on several lines of evidence:

   a. **Tier 1 Evaluation**. A suitability based on a Tier 1 evaluation has also been referred to as "exclusionary" in previous guidance. A Tier 1 evaluation is done for every project, and includes a comprehensive analysis of all existing information on the proposed dredging, including potential sources of contamination, site history, and existing data. If the information compiled in Tier 1 is adequate to meet exclusionary criteria, factual determinations can be made without proceeding to the higher tiers (ITM 1998).

      Section 404 of the Clean Water Act (CWA) includes provisions for exclusion from testing based on Tier 1 evaluations, as does the ITM guidance documents. Exclusions can be made if a Tier 1 evaluation indicates that the dredged material is not considered to be a "carrier of contaminants" (40 CFR 230.60 (b)). Potential exclusion situations occur most commonly "if the dredged material is composed primarily of sand, gravel and/or inert materials; the sediments are from locations far removed from sources of contaminants, or if the sediments are from depths deposited in preindustrial times and have not been exposed to modern sources of pollution" (ITM 1998). Testing may also not be necessary "where the discharge site is adjacent to the excavation site and subject to the same sources of contaminants, and materials at the two sites are substantially similar" (40 CFR 230.60(c)).

      The DMMP carefully considered whether the proposed dredged material could be given a Tier 1 suitability determination based on existing information. Although much of the sediment meets the

general guidelines for physical characteristics, it is clearly exposed to potential sources of contamination, and cannot be considered "far removed" from those potential sources.

b. **Recency**. The DMMP also considered whether a suitability determination could be issued based on the results of previous characterizations or other existing information. Because the 2011 characterization was not designed to address DMMP suitability, we considered whether previous data could be used to augment this dataset. However, the most recent previous characterization occurred in 2003, ten years ago. Both SEF and DMMP guidelines give seven years as the maximum time for which data can be considered in a suitability determination. This is especially important in areas that are not far removed from potential sources of contamination.

c. **Sufficiency of Characterization**. The locations and level of effort of the specifics of the 2011 testing did not fulfill the level of effort or information required per SEF and DMMP guidance, as discussed below.

9704 Water quality, and sediment quality; sediment quality

Although the DMMP could not issue a suitability determination for the majority of the material in the proposed dredging project, the subject report definitely provided excellent background and historic information that was invaluable for the next steps supporting the design of a suitable characterization.

3. **Sampling Reaches**. According to descriptions and data given, the DMMP recognized five separate sections, or reaches, of the proposed dredging prism that should be considered separately for sampling/characterization purposes. These five reaches are:
   1. Ice Harbor Lock (sufficient data available for tier 1 evaluation, no further testing needed)
   2. Clarkston West (including both the Federal Navigation Channel (FNC) and the Port of Clarkston Grain Elevator)
   3. Clarkston East (including the Federal Navigation Channel)
   4. Port of Clarkston (including only areas identified in Figure 20 of subject report)
   5. Lewiston (including the Federal Navigation Channel and the Port of Lewiston)

   These areas were identified based on apparent shoaling patterns and sediment characteristics. Please note that these are not DMMUs, which are described below.

4. **Dredged Material Management Units (DMMUs).** The DMMP defines DMMUs as manageable, dredgeable units of sediment which can be differentiated by sampling and which can be separately dredged and disposed within a larger dredging area. The volume of sediment in each DMMU is based on the rank and character of the material.

   The subject report allowed the DMMP to verify rank and homogeneity/heterogeneity of the sediments. These are the two factors that influence sampling and testing frequency. Heterogeneous sediment has sediment layers of potentially different characteristics or levels of chemicals of concern. They are typically sampled with a coring device that samples all layers of the sediment. Homogeneous sediment is well-mixed and typically deposited over a short time-frame. Homogenous sediments are often found in settling basins or some navigation channels where river flow slows down abruptly. A dredge prism made up of homogenous sediment can be represented with grab samples. For this project, it appears that the vast majority of the proposed dredged material can be considered homogenous and thus can be sampled with surface grabs.

9705 Water quality, and sediment quality; sediment quality

Based on core logs from the 2011 sampling, as well as on shoaling patterns often seen in such areas, Clarkston West, Clarkston East and Lewiston reaches can all be considered homogenous, and ranked of low concern. Clarkston West showed some indications of heterogeneity, but the DMMP agencies determined that grab samples would represent the mixture of fines and sand that were observed in the core samples. DMMUs in these areas need to be defined based on Table 1.

Table 1. Maximum sediment volume represented by each sample and DMMU

	Homogeneous Material		Heterogeneous Material			
			# of samples required		# of analyses (DMMUs) required	
Project Rank	# of samples required	# of analyses (DMMUs) required	Surface	Subsurface	Surface	Subsurface
L	8,000 cy	60,000 cy	8,000 cy	48,000 cy	72,000 cy	60,000 cy
LM	8,000 cy	40,000 cy	8,000 cy	32,000 cy	48,000 cy	40,000 cy
M	4,000 cy	20,000 cy	4,000 cy	16,000 cy	24,000 cy	20,000 cy
H	4,000 cy	8,000 cy	4,000 cy	4,000 cy	12,000 cy	8,000 cy

Thus reaches 2, 3 & 5 listed above (Clarkston West, Clarkston East and Lewiston respectively) need to be divided into maximum 60,000 cubic yard DMMUs that can each be characterized with one analysis of a composite of all grab samples. Area 4 (Port of Clarkston) showed the greatest amount of core variability and fines content. This area is considered heterogeneous and must be sampled with core samples. We also agree with the report that this area should be ranked low moderate for this sampling.

5. **Sampling Density.** Based on guidelines from Table 1 above, the DMMP expects the following sampling density to be required. These sampling requirements are based on volumes given in Table 9 of the subject report. Volumes listed for separate reaches appear to have discrepancies within the subject report. Sampling and analysis requirements should be verified and potentially recalculated based on volumes from the most recent November 2012 project survey. It is understood that project proponents require separate DMMUs for the federal and port proposed dredging. Table 2 reflects this breakdown.

Table 2. Number of samples and analyses required for Snake River dredging.

Reach	Given Rank	Adjusted Rank	Volume (from report Table 9)	# of grab samples required	# of core samples required	# of analyses required (DMMUs)
Ice Harbor Lock	Very low	Very low	2,155	-	-	0
FNC Clarkston West	Low	Low	133,482	17	-	3
POC Grain Elevator	LM	Low	3,218	2	-	1
FNC Clarkston East	Low	Low	168,910	22	-	3
Port of Clarkston	LM	LM	9,041	-	2	1
FNC Lewiston	Low	Low	140,210	18	-	3
Port of Lewiston	LM	Low	3,275	2	-	1
Totals			**460,291**	**63**	**2**	**12**

Notes:
1. All sampling and analysis requirements are based on the given volumes. The SAP should reflect the most current volumes estimates and recalculate requirements as necessary.
2. All sample and analysis requirements have been rounded up to the nearest whole number.
3. A minimum of two samples is required for one DMMU, regardless of volume.

9706 Water quality, and sediment quality; sediment quality

6. **Chemicals of Concern.** Based on the subject report, the list of chemicals of concern can be reduced from the standard DMMP list. Those chemicals and classes of chemicals which were demonstrated to have no or very low detections over multiple characterizations will not require analysis. Table 3 defines those chemicals for which the 10 DMMU composite samples need to be analyzed.

   Analysis needs to be performed on those chemicals listed in black and blue. Those chemicals listed in blue are new to the COC list for freshwater that have been proposed by the Washington Department of Ecology, and should have analyses performed for this characterization. Those chemicals listed in red do not, as of the date of this memo, show sufficient reason-to-believe for analysis in this characterization, for reasons described below:

   a. **Dioxins.** Very low TEQs were found in most samples analyzed in 2011, and in all the samples in areas proposed for dredging. They indicated a low "reason-to-believe" that dioxins are of concern in the proposed dredge prism. Due to the presence of an upstream paper plant, however, this decision may need to be revisited for future characterizations.
   b. **PAHs.** Levels of PAHs, when occasionally detected, have been found at orders of magnitude below levels of concern in either marine of freshwater guidelines. There are few sources in the area for this class of chemicals.
   c. **Other organics**. Again, lack of sources and previous data show low reason-to-believe for presence of these chemicals at levels of concern.

   Please be aware that non-detected chemicals with practical quantitation levels above the regulatory guidelines may either trigger bioassay testing or result in a determination of unsuitability for unconfined open-water disposal/placement. Laboratories should endeavor if at all possible to meet the regulatory guidelines with their reporting limits, and problems meeting these guidelines must be reported and coordinated with the DMMP immediately.

7. **Caveats**. Though we have been as thorough as possible in outlining required testing and the regulatory guidelines to which chemical concentrations will be compared, there are a few cautions we need to mention that may affect this project.

   a. Table 3 shows only proposed freshwater guidelines that have not yet been adopted by dredging programs. These guidelines are based on effects to benthic resources—not to fish. RSET is considering evidence for fish-based regulatory levels that may or may not be more restrictive than the guidelines based on benthic resources.
   b. Table 3 has been coordinated with all DMMP agencies; it has not yet been coordinated with state and federal fisheries agencies which may have additional analysis requirements for sediment being placement for fish habitat. It is expected that those agencies will be available for coordination in the near future, but we cannot rule out further input from them.

8. **Next Steps**. The DMMP stands ready to provide timely review and assistance in characterizing this project, in any way we can. The next step in pursuing this characterization will be preparation and approval of a coordinated sampling and analysis plan.

   Please contact Lauran Warner, DMMO, at 206-764-6550 or lauran.c.warner@usace.army.mil with questions, concerns or requests.

Table 3. Chemicals of Concern for Snake River Characterization

CHEMICAL	CAS[1] NUMBER	Analyze for all chemicals in standard list; only analyze for chemicals in non-standard list if DMMP reason-to-believe guidelines require them			Used for freshwater dredged material w/in DMMP area			
		DMMP Guidelines			Interim FW (2006)		Proposed FW (2013)	
		SL	BT	ML	SL1	SL2	SL1	SL2
METALS (mg/kg dry weight)								
Antimony	7440-36-0	150	---	200	---	---	---	---
Arsenic	7440-38-2	57	507.1	700	20	51	14	120
Cadmium	7440-43-9	5.1	11.3	14	1.1	1.5	2.1	5.4
Chromium	7440-47-3	260	260	---	95	100	72	88
Copper	7440-50-8	390	1,027	1,300	80	830	400	1200
Lead	7439-92-1	450	975	1,200	340	430	360	>1300
Mercury	7439-97-6	0.41	1.5	2.3	0.28	0.75	0.66	0.8
Nickel	7440-02-0	---	---	---	60	70	26	110
Selenium	7782-49-2	---	3	---	---	---	11	>20
Silver	7440-22-4	6.1	6.1	8.4	2	2.5	0.57	1.7
Zinc	7440-66-6	410	2,783	3,800	130	400	3200	>4200
PAHs (µg/kg dry weight)								
Naphthalene	91-20-3	2,100	---	2,400	500	1,300		
Acenaphthylene	208-96-8	560	---	1,300	470	640		
Acenaphthene	83-32-9	500	---	2,000	1,100	1,300		
Fluorene	86-73-7	540	---	3,600	1,000	3,000		
Phenanthrene	85-01-8	1,500	---	21,000	6,100	7,600		
Anthracene	120-12-7	960	---	13,000	1,200	1,200		
2-Methylnaphthalene[2]	91-57-6	670	---	1,900	470	560		
Total LPAH	---	**5,200**	---	**29,000**	**6,600**	**9,200**		
Fluoranthene	206-44-0	1,700	4,600	30,000	11,000	15,000		
Pyrene	129-00-0	2,600	11,980	16,000	8,800	16,000		

CHEMICAL	CAS[1] NUMBER	Analyze for all chemicals in standard list; only analyze for chemicals in non-standard list if DMMP reason-to-believe guidelines require them			Used for freshwater dredged material w/in DMMP area			
		DMMP Guidelines			Interim FW (2006)		Proposed FW (2013)	
		SL	BT	ML	SL1	SL2	SL1	SL2
Benz(a)anthracene	56-55-3	1,300	---	5,100	4,300	5,800		
Chrysene	218-01-9	1,400	---	21,000	5,900	6,400		
	205-99-2							
	205-82-3							
Benzofluoranthenes (b, j ,k)	207-08-9	3,200	---	9,900	600	4000		
Benzo(a)pyrene	50-32-8	1,600	---	3,600	3,300	4,800		
Indeno(1,2,3-c,d)pyrene	193-39-5	600	---	4,400	4,100	5,300		
Dibenz(a,h)anthracene	53-70-3	230	---	1,900	800	840		
Benzo(g,h,i)perylene	191-24-2	670	---	3,200	4,000	5,200		
Total HPAH	---	**12,000**	---	**69,000**	**31,000**	**55,000**	**17,000**	**30,000**
CHLORINATED HYDROCARBONS (µg/kg dry weight)								
1,4-Dichlorobenzene	106-46-7	110	---	120	---	---		
1,2-Dichlorobenzene	95-50-1	35	---	110	---	---		
1,2,4-Trichlorobenzene	120-82-1	31	---	64	---	---		
Hexachlorobenzene (HCB)	118-74-1	22	168	230	---	---		
PHTHALATES (µg/kg dry weight)								
Dimethyl phthalate	131-11-3	71	---	1,400	46	440		
Diethyl phthalate	84-66-2	200	---	1,200	---	---		
Di-n-butyl phthalate	84-74-2	1,400	---	5,100	---	---	380	1000
Butyl benzyl phthalate	85-68-7	63	---	970	260	370		
Bis(2-ethylhexyl) phthalate	117-81-7	1,300	---	8,300	220	320	500	22000
Di-n-octyl phthalate	117-84-0	6,200	---	6,200	26	45	39	>1100
PHENOLS (µg/kg dry weight)								
Phenol	108-95-2	420	---	1,200	---	---	120	210
2-Methylphenol	95-48-7	63	---	77	---	---		

CHEMICAL	CAS[1] NUMBER	Analyze for all chemicals in standard list; only analyze for chemicals in non-standard list if DMMP reason-to-believe guidelines require them			Used for freshwater dredged material w/in DMMP area		Proposed FW (2013)	
		DMMP Guidelines			Interim FW (2006)			
		SL	BT	ML	SL1	SL2	SL1	SL2
4-Methylphenol	106-44-5	670	---	3,600	---	---	260	2000
2,4-Dimethylphenol	105-67-9	29	---	210	---	---		
Pentachlorophenol	87-86-5	400	504	690	---	---	1200	>1200
MISCELLANEOUS EXTRACTABLES (µg/kg dry weight)								
Benzyl alcohol	100-51-6	57	---	870	---	---		
Benzoic acid	65-85-0	650	---	760	---	---	2900	3800
Dibenzofuran	132-64-9	540	---	1,700	400	440	200	680
Hexachlorobutadiene	87-68-3	11	---	270	---	---		
N-Nitrosodiphenylamine	86-30-6	28	---	130	---	---		
beta-Hexachlorocyclohexane							7.2	11
PESTICIDES & PCBs (µg/kg dry weight)								
4,4'-DDD	72-54-8	16	---	---			310	860
4,4'-DDE	72-55-9	9	---	---			21	33
4,4'-DDT	50-29-3	12	---	---			100	8100
sum of 4,4'-DDD, 4,4'-DDE and 4,4'-DDT		---	50	69	---	---		
Aldrin	309-00-2	9.5	---	---	---	---		
Total Chlordane	5103-71-9							
	5103-74-2							
(sum of cis-chlordane, trans-chlordane, cis-nonachlor, trans-nonachlor, oxychlordane)	5103-73-1							
	39765-80-5							
	27304-13-8	2.8	37	---	---	---		
Dieldrin	60-57-1	1.9	---	1,700	---	---	4.9	9.3
Heptachlor	76-44-8	1.5	---	270	---	---		
Endrin ketone							8.5	---
Carbazole							900	1100

CHEMICAL	CAS[1] NUMBER	Analyze for all chemicals in standard list; only analyze for chemicals in non-standard list if DMMP reason-to-believe guidelines require them			Used for freshwater dredged material w/in DMMP area			
		DMMP Guidelines			Interim FW (2006)		Proposed FW (2013)	
		SL	BT	ML	SL1	SL2	SL1	SL2
Total PCBs (Aroclors)	---	130	38 [3]	3,100	60	120	110	2500
ORGANOMETALLIC COMPOUNDS								
Tributyltin ion (interstitial water; ug/L)	56573-85-4	0.15	0.15	---	---	---	---	---
Tributyltin ion (bulk; ug/kg)[5]	56573-85-4	73	73	---	75	75	47	320
Dibutyltin							910	130000
Monobutyltin							540	>4800
Tetrabutyltin							97	>97
DIOXINS/FURANS								
Total TEQ (ppt dry wt)	See DMMO Dioxin page	10-Apr	10	---	---	---		
GUAIACOLS & BUTADIENES								
Guaiacol (2-methoxyphenol)		No guidelines determined			---	---		
Chlorinated guaiacols (3,4,5-trichloroguaiacol; 4,5,6-trichloroguaiacol; tetrachloroguaiacol)		No guidelines determined			---	---		
Tri-, tetra-, and pentachlorobutadienes		No guidelines determined			---	---		

Notes:

[1] Chemical Abstract Service Registry Number

[2] 2-Methylnaphthalene is not included in the summation for total LPAH.

[3] This value is normalized to total organic carbon, and is expressed in mg/kg carbon.

[4] Analyses required only when there is sufficient reason-to-believe for presence in given project or location. See the DMMP Users Manual for more information on when to include these compounds in a characterization.

[5] Bulk sediment measurement of TBT is used only when porewater extraction cannot be accomplished.

Analyses for chemicals listed in RED do not need to be performed for this characterization.

Analyses for chemicals listed in BLUE are proposed additions to the SEF freshwater guidelines and should be included in this characterization.

0129_CWA_Fagerholm

From: Vectorfins
To: PSMP
Subject: Comment
Date: Tuesday, April 09, 2013 4:08:20 PM

9679 Costs and funding

Dear People

There is no way that this should happen.
There is too much sediment in the whole area and over a short period of time, the money wasted by dredging will be lost due to it filling back in.
The taxpayer should not be accountable for this.
Sincerely
Jeff Fagerholm
Parkdale Oregon

0130_CWA_Frank

From: Sierra Club on behalf of Bridget Frank
To: PSMP
Subject: Please carefully consider dredging the Lower Snake
Date: Wednesday, May 01, 2013 3:05:02 PM

May 1, 2013

Army Corps of Engineers

Dear of Engineers,

In these times of limited federal dollars, it's absurd for taxpayers to subsidize barging when the same cargo could be more efficiently transported on existing railroad. The Corps should conduct an honest cost-benefit analysis that determines the benefits of this proposal outweigh the costs.

9592 Costs and funding

The effects of dredging, including dumping dredge spoils into the reservoirs, may threaten Endangered Species Act-listed stocks of salmon and steelhead, which are in the system year-round.

9593 Aquatic Resources; Threatened and Endangered Species (Aquatic)

Increased sediment load due to large forest fires - a result of climate change - will increase the flood risk to the city of Lewiston and would require an endless and unsustainable cycle of dredging at an ongoing cost to taxpayers.

9594 Hydrology and Sediment; Watershed Sediment Production

Please do a cost benefit analysis to ensure that the benefits of this proposal outweigh such steep costs.

Sincerely,

Mrs. Bridget Frank
4655 N Bluegrass Ave
Boise, ID 83703-3107
(208) 602-1274

0131_CWA_Herbert

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9584 Public Hearing Request

9585 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

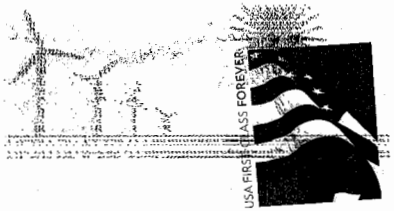
Sincerely,

M. Herbert

Mike Herbert
6305 Shetland Pl.
West Linn, OR 97068

N. Herbold
6305 Shetland pl.
West Linn, OR. 97068

PORTLAND OR 970
23 APR 2013 PM 5 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA
99362-1876

99362187601

0132_CWA_KernsE

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

From: Edward Kerns
2335 SE Pine Street
Portland, OR 97214

9576 Public hearing request

9577 Water quality, and sediment quality; sediment quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Walla Walla, WA was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Walla Walla for the upper watershed and one in Portland for the lower watershed.

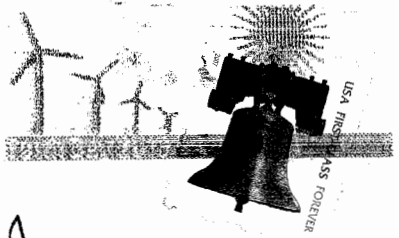
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Ed Kerns

Ed Kerns
2335 SE Pine
Portland OR
97214

PORTLAND OR 970
23 APR 2013 PM 3 L



Sandy Shelin
US Army Corps of
Engineers Wall Walla
201 N. 3rd Ave
Walla Walla WA 99362

0133_CWA_KernsS

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9573 Water quality, and sediment quality; sediment quality

9572 Public hearing request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

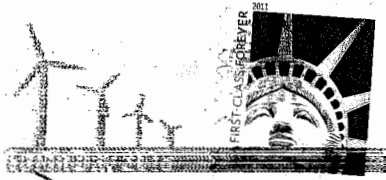
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Sarah Kerns
5536 S.E. Harlow St.
Milwaukie OR. 97222

S. Kerns
5536 SE. Harlow St
Milwaukie, OR. 97222

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,

201 N. Third Ave.
Walla Walla WA.
99362-1876

99362187601

0134_CWA_Lauro

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9561 Public hearing request

9562 Water quality, and sediment quality; sediment quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

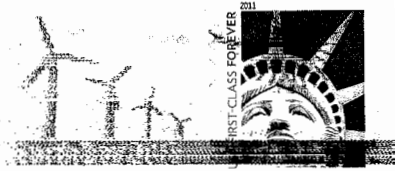
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

MIKE LAURO
1630 NE 126
PORTLAND 97230

M. Laudo
1630 NE. 126th
Portland OR. 97230

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA.
99362-1876

99362187601

0135_CWA_McLanther

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9556 Public hearing request

9557 Water quality, and sediment quality; sediment quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

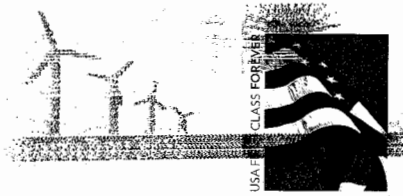
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Andrew J. McLanther
1515 SW Jefferson #19
Portland, OR 97201

A. Melanther
1515 SW. Jefferson #19
Portland, OR 97201

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA
99362-1876
99362187601

0136_CWA_Melton

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9554 Water quality, and sediment quality; sediment quality

9553 Public hearing request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

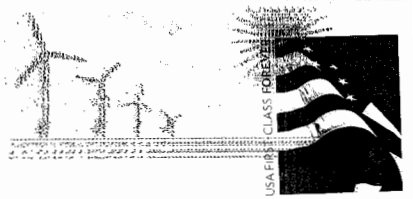
Sincerely,

Jan Melton

2714 SE 29th Ave #E
Portland, OR 97202

J. Melton
2714 SE. 29th Ave #E
Portland OR. 97202

PORTLAND OR 970
29 APR 2013 PM 5 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third ave.,
Walla Walla WA
99362-1876

99362187601

0137_CWA_NezPerce

From: Marlene Trumbo
To: PSMP
Cc: Turnipseed, Donna NWW
Subject: Nez Perce Tribe"s comments on the Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2-13-14 Washington and Idaho (Public Notice No: CENWW-PM-PD-EC 13-01)
Date: Tuesday, April 30, 2013 3:03:02 PM
Attachments: 30apr13_NPT_ACOE_LSR-dreding404_comments.pdf

ATTN: Sandra Shelin

Attached are the Nez Perce Tribe's comments on the Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2-13-14 Washington and Idaho (Public Notice No: CENWW-PM-PD-EC 13-01). If you have any problems opening the attachment please contact me.

Marlene Trumbo

Office of Legal Counsel

Nez Perce Tribe

P. O. Box 305

Lapwai, ID 83540

(208) 843-7355

(208) 843-7377, fax

Nez Perce

TRIBAL EXECUTIVE COMMITTEE
P.O. BOX 305 • LAPWAI, IDAHO 83540 • (208) 843-2253

April 30, 2013

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, ATTN: Sandra Shelin, CENWW-PM-PD-EC
201 North Third Avenue, Walla Walla WA 99362-1876

By Electronic (psmp@usace.army.mil) Mail

Re: Nez Perce Tribe's comments on the Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2-13-14 Washington and Idaho (Public Notice No: CENWW-PM-PD-EC 13-01)

9534 Environmental laws and regulations

Dear Ms. Shelin:

The Nez Perce Tribe (Tribe) appreciates the opportunity to comment on the Walla Walla District of the U.S. Army Corps of Engineers (Corps) Lower Snake and Clearwater Rivers Winter Maintenance Dredging 2013-14 Washington and Idaho (Public Notice No: CENWW-PM-PD-EC 13-01. The Tribe attaches and incorporates by reference its March 26, 2013 comments to the Corps regarding the Programmatic Sediment Management Plan and Draft Environmental Impact Statement. For the reasons below, the Tribe has concluded that the Corps has not adequately analyzed the proposed dredging activities under NEPA or met the requisite permit requirements under Section 404 of the Clean Water Act and accordingly the permit for the proposed 2013-14 dredging and disposal activities should not be authorized.

I. Project Description

According to the March 11, 2013 Public Notice, the Corps proposes to perform maintenance dredging activities at four locations in the Lower Granite and McNary Reservoirs on the lower Snake and Clearwater Rivers in Washington and Idaho. The purpose of the maintenance dredging, according to the Corps, is "to restore the authorized depth of the Federal navigation channel and to remove sediment from port areas." The sites and amount to be dredged (in cubic yards) include the Federal Navigation Channel at Confluence of Snake and Clearwater Rivers (469,212); Port of Clarkston (14,143); Port of Lewiston (4,485); and Ice Harbor Navigation Lock Approach (3,203) for a total of 491, 043 cubic yards. The Corps proposes to perform the dredging during the 2013-14 winter in-water work window which is currently identified as December 15 through March 1. The Corps plans to use the dredged material to create shallow water habitat for juvenile salmon at RM 116 creating, the Corps calculates, about 7.3 acres of shallow water habitat.

II. General Comments

Since time immemorial the Tribe has used and occupied the lands and waters of north-central Idaho, southeastern Washington, northeastern Oregon and areas of Montana for subsistence, ceremonial, commercial, and religious purposes. In 1855 the United States negotiated a treaty with the Tribe. Treaty of June 9, 1855, with the Nez Perces, 12 Stat. 957 (1859). In Article 3 of this treaty, the Tribe explicitly reserved to itself certain rights, including "the exclusive right to take fish in streams running through or bordering the Reservation," "the right to take fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands." These reserved rights include the right to fish within the project area identified in the PSMP/DEIS and the right to take fish passing through the Lower Snake River.

Salmon, steelhead, sturgeon and lamprey are integral to the spiritual, physical and economic health of the Tribe. The Tribe reveres the fishery and the waters that support the life and sustenance these resources have given, and continue to provide Tribal members. The Snake River corridor is an important migratory route for threatened spring, summer, and fall Chinook salmon and steelhead, as well lamprey and sturgeon. Any activities that potentially threaten these important resources are of great concern to the Tribe.

The Tribe cannot overstate how significant a burden the United States has imposed on the Nez Perce people through the construction and operation of the Lower Snake River and Columbia River Dams. These structures have contributed to a massive decline in salmon, steelhead and lamprey that have returned to our waters and nourished our people and the land since time immemorial. Nez Perce elders believe the circle of life has been broken and ask us to consider what the consequences of breaking that circle may mean for future generations. For the Nez Perce people, the loss of the sacred Chinook salmon, steelhead, lamprey and other species has meant a loss of our most important food source, and has been directly linked to a decline in the health and welfare of tribal members. The impact to our cultural and spiritual foundation, language, beliefs and way of life is incalculable.

As the Tribe stated in its March 26, 2013 comments on the PSMP/DEIS, it does not support the Corps' preferred Alternative 7 and has determined that the PSMP/DEIS is inadequate for many reasons. The PSMP is the product of an unreasonably narrow purpose and need that relies on dredging while eliminating from consideration viable options such as increased implementation of sediment reduction measures, maintenance of the Lower Snake River navigation channel at the less than 14 feet depth as has been occurring using light-loading of barges, and partial breaching of the Lower Snake Dams. As a result of the narrow purpose and need, the Corps failed to fully evaluate a reasonable range of alternatives. To safeguard and advance the Corps' treaty and trust responsibilities to the Tribe, the Tribe requests that the Corps fully analyze and adopt a new alternative that prioritizes the additional measures above as well as components of Alternatives 2, 3 and 4 in a manner that provides a regional sediment management approach which emphasizes non-dredging-based sediment control measures.

9535 NEPA; range of alternatives

9539 Aquatic resources; threatened and endangered species (aquatic)

9538 Socioeconomics; environmental justice communities

The Corps also needs to perform significant additional analysis of the project's impacts. The PSMP/DEIS fails to analyze the project's impacts on Tribal treaty rights, Tribal cultural resources, and socioeconomics. The PSMP/DEIS inadequately analyzes the project's effects on ESA-listed species and lamprey. The economic analysis regarding the costs and benefits of the proposal is inaccurate and incomplete. Additional analysis is also necessary to address the impacts of climate change, as well as impacts from potential future changes in flood storage contemplated in the Columbia River Treaty. Despite the many problems with the PSMP/DEIS, the Corps is relying on the inadequate DEIS to satisfy its obligations under NEPA for the proposed dredging activities.

16122 climate change

9540 Costs and funding

The Corps also offers no analysis or meaningful explanation in the Public Notice addressing how the Corps' proposed dredging activities will comply with the Clear Water Act. *See* Public Notice at 9 ("The Corps' analysis of the environmental impacts associated with the proposed maintenance dredging activity is addressed in the PSMP/DEIS dated December 2012"). Relying on the PSMP/DEIS NEPA analysis alone will not fulfill the substantive requirements of Section 404(b)(1). As the Corps is aware, the agency must perform a public interest review which includes an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. In addition the Corps must perform, among other mandates, an evaluation of practical alternatives that may obviate the need for dredging; assess whether the proposed dredging and disposal activities will result in no significant degradation of U.S. waters; and ultimately base a determination on sufficient information reasonably justifying compliance with the Section 404(b)(1) Guidelines. The Tribe is unable to identify any evidence that the Corps performed this substantive analysis required under the Clean Water Act.

9542 Environmental laws and regulations

The Tribe is also concerned with the Corps' reliance on the DEIS for the Section 404 permit because the DEIS still is still undergoing public review. Yet the Corps published the 30-day Public Notice while the DEIS was still in the public comment period, demonstrating, in the Tribe's view, the Corps' commitment to proceed with dredging even before the agency had received any comments from the Tribe or others concerning the PSMP/DEIS. The Corps should have completed the NEPA process rather than relying on a *draft* EIS to justify NEPA compliance with the Section 404 permit.

9543 Environmental laws and regulations

A. The Corps Has Failed To Perform a Comprehensive Public Interest Review Required Under the Clean Water Act.

Under Section 404 of the CWA, the Corps regulates the discharge of dredged or fill material into waters of the United States. 33 CFR § 335.2. The Corps does not issue itself a CWA permit to authorize Corps discharges of dredged material or fill material into U.S. waters, but does apply the 404(b)(1) guidelines and other substantive requirements of the CWA and other environmental laws. 33 C.F.R. 335.2. "The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the

9544 Environmental laws and regulations

proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case." 33 C.F.R. § 320.4(a).

The Tribe is concerned that the only discussion of environmental impacts in the Public Notice is a statement asserting that the activity "is addressed in the PSMP/DEIS dated December 2012." This assertion is erroneous because, as the Tribe's March 26 comments make clear, the Corps' DEIS inadequately evaluates the environmental impacts arising from the "immediate need" to dredge and therefore cannot be used to satisfy the required public interest review that the agency is required to perform under the CWA.

First, the DEIS fails to evaluate the impacts of dredging on the Tribe's interests. The Corps provides no identification of treaty and trust resources that may be affected by the project, and performs no evaluation at all of the project's impacts on treaty rights. The PSMP/EIS also fails to evaluate the Tribe as an affected population for environmental justice purposes, and performs no analysis of the project's socioeconomic impacts to the Tribe. The Corps also provides an inadequate analysis of the impacts to Tribal cultural resources.

Second, the DEIS also fails to provide sufficient information supporting its assertion that in-water disposal of dredge spoils to create shallow water habitat will, in fact, benefit juvenile fall Chinook. The research the Corps references in support of its conclusion that creating shallow-water habitat benefits natural subyearling fall Chinook does not state whether Clearwater juveniles would benefit. This is an important consideration because the portion of fall Chinook spawning in the Clearwater consistently makes up about 1/3rd of the naturally spawning population of NOAA's Snake River Fall Chinook Evolutionarily Significant Unit (ESU).

Third, there is an inadequate analysis concerning the impacts of predation on juvenile fall Chinook salmon that may use this new shallow habitat, as well as the impacts to sturgeon due to the decrease in mid-depth habitat for sturgeon. The Tribe comments also noted that the Corps' analysis of impacts to lamprey was based on flawed methodologies.

Fourth, the Corps also did not perform an evaluation of the thermal impacts, including climate change, on aquatic resources caused by the creation of shallow water from dredging and the in-water disposal of dredge spoils. The agency also did not look at the impacts of potential changes to Columbia River administration arising from the Columbia River Treaty.

Fifth, the DEIS also failed to adequately analyze the impacts of dredging on barge traffic, socioeconomics, and environmental justice. Under Section 320.4(q), the Corps should undertake "an independent review of the need for the project from the perspective of the overall public interest." This analysis was not performed in the DEIS.

Sixth, the Corps did not adequately assess dredging's impacts to cultural resources. Section 320.4(e) specifically states that a "full evaluation of the general public interest requires that due consideration be given to the effect which the proposed…activity may have on values such as those associated with…historic properties and…Indian religious or cultural sites." The Tribe

9545 Cultural resources

submitted numerous comments for the DEIS identifying instances where the Corps has not adequately identified and evaluated the environmental impacts of the PSMP, including dredging. The Nez Perce Tribe remains very concerned about the adequacy of the efforts to identify and protect cultural resources in the proposed dredging and disposal areas. The Corps acknowledges that dredging will occur on two pre-contact archaeological sites, but assumes that all cultural remains in the dredge corridor have been destroyed by previous dredging events. To our knowledge, the Corps has made no effort to confirm this assumption, so cannot guarantee that no intact cultural remains will be impacted. The Corps also appears to be unsure if there are archaeological remains at the in-water disposal site at Knoxway Canyon. The Corps assumes that burying any potential archaeological sites is a benefit, as it might discourage erosion impacts. Finally, and perhaps most disturbing, is the potential for redeposited ancestral and archaeological remains in the sediment to be dredged in Lewiston and Clarkston. The Corps asserts that there will be no impact to these resources as long as they remain in the Snake River, and thereby bolsters the case for in-water disposal. The Corps should not make this assumption without Tribal consultation, as the Nez Perce Tribe attaches cultural and religious significance to ancestral remains, even those found in disturbed contexts.

B. The Corps Has Not Complied With EPA's 404(b)(1) Guidelines

Section 320.4(a) provides that "for activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) Guidelines." 33 C.F.R. § 320.4(a). "Fundamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern." 40 C.F.R. § 230.1(c).

The 404(b)(1) Guidelines require that a permit be denied for several reasons, including when, for example: (1) there is a practicable alternative to the proposed discharge which would have less adverse impacts on the aquatic ecosystem; (2) when the Corps determines that the discharge will cause or contribute to a significant degradation of the waters of the United States; and (3) when there is insufficient information to make a reasonable judgment as to whether the discharge will comply with the Guidelines.

1. The Corps Cannot Conclude That No Practical Alternative to the Proposed Discharge Exists.

The Corps has not complied with the Guidelines in evaluating the proposed 2013-14 dredging and disposal activities. Section 230.10(a) requires that a permit application be denied where there is a "a practical alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). Although a NEPA alternatives analysis *may* be sufficient for complying with the least environmentally damaging practical alternative requirement, the NEPA alternatives "may not have [been] considered in sufficient detail to respond to the requirements of these Guidelines." 40 C.F.R. § 230.10(a)(4).

9546 NEPA; Range of Alternatives

The Tribe's March 26 comments on the PSMP/DEIS indicate that the Corps failed to evaluate a reasonable range of alternatives. By narrowly defining the purpose and need to require maintenance of the navigation channel at *no less* than 14 feet by 250 feet *year-round*, and then applying two levels of screening criteria for the alternatives development that eliminate alternatives which, according to the Corps, interfere with authorized purposes (again maintaining the navigation channel at no less than 14 feet year-round), the Corps has impermissibly limited the range of alternatives it believes it must analyze to just *two* alternatives which both include dredging. These two dredging-based alternatives belie the Corps' assertion that it is stressing a "system based approach" to solve sediment-related problems. For example, Appendix F of the DEIS indicates that "[p]eriodic drawdown of the reservoir as a means to erode sediment from the confluence area appears feasible, but to be the most effective would have to occur during a period of high seasonal discharge." DEIS Appendix F at 20. The document goes on to conclude that "[t]his method sediment management should be tested to prove reliability and evaluate possible adverse impacts on infrastructure in Lower Granite Reservoir." *Id.*

Yet the Corps eliminated this "feasible" alternative from further review because it would not meet the narrow purpose and need. Such an excessively narrow range of alternatives for a programmatic document is unreasonable and does not satisfy NEPA. The Tribe recommended that the Corps develop and fully evaluate a new alternative that protects tribal treaty rights and resources by, for example, including measures that would include maintaining the navigation channel at less than 14-feet, increasing upland sediment reduction measures, and dam breaching. Without fully evaluating these viable alternatives, the Corps cannot conclude that there may be "a practical alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem."

EPA, like the Tribe, has also concluded that the Corps' DEIS does not comply with the Guidelines. According to comments EPA submitted to the Corps on March 26, 2013 regarding the PSMP/DEIS

> [t]he DEIS does not fully analyze the effects of in-water disposal or appear compliant with the 404(b)(1) Guidelines. The EPA often supports in-water disposal of dredged material; however, the EIS should more rigorously document that in-water disposal for the immediate maintenance action complies with the Guidelines. Based on the available information we do not believe the proposed action [including dredging] has been clearly demonstrated to be the least environmentally damaging practicable alternative.

EPA DEIS comments at 11-12. EPA goes on to provide four recommendations for the final EIS including (1) alternatives analysis for future disposal of dredged material, both in-water and in appropriate and available upland sites, be addressed; (2) a full suite of disposal alternatives be evaluated; (3) the need to create shallow water habitat for juvenile salmonids at Knoxway Canyon be demonstrated; and (4) selection of the Least Environmentally Damaging Practicable Alternative be demonstrated. *Id.* at 12.

9547 Water quality, and sediment quality; water quality

In summary, the DEIS has not properly evaluated a full range of reasonable alternatives. This failure is inconsistent with the Guidelines' requirement that the Corps identify a proposal that would have a lesser impact on the environment. As a result, a permit cannot be issued until, among other requirements, the Corps identifies and evaluates a broader range of practical alternatives to comply with the Guidelines.

2. The Corps Has Not Demonstrated that the Proposed Dredging Will Not Result in Significant Degradation to U.S. Waters.

"No discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States." 40 C.F.R. § 230.10(c). The Tribe raised concerns in its DEIS comments concerning the lack of analysis regarding temperature impacts from the creation of shallow water habitat from dredge spoils. The Tribe also noted the lack of any analysis concerning the impacts of climate change on Snake River water temperatures and how changing climate may affect the Corps' proposal to dredge, among other measures.

The Tribe also agrees with concerns EPA raised in its March 26 EIS comments concerning uncertainties with sediment quality. EPA states that "[t]he DEIS does not provide sufficient information to determine the suitability of immediate need dredged material prism for in-water placement." EPA comments at 12. EPA notes that the Corps' sampling efforts in August 2011 in support of the EIS which is now being used to support proposed 2013-14 "immediate need" dredging were inadequate. *Id.* EPA's review of the draft report "did not include basic information that would allow a reasonable review." *Id.* For example, "there was not an adequate description of the fieldwork and compositing scheme, grain size data, number of samples related to proposed dredging volume, basic table comparing the data to applicable limits, detection limits, and supporting information explaining how the Corps determined sample size for a certain portion of samples and chemical analyses." *Id.* EPA concluded that "[b]ased on current information it is unclear whether the level of documentation is adequate to characterize this project without further testing." *Id.*

EPA also noted in its comments that "[t]he DEIS not include the most recent water quality results from the 2006 Water Quality Monitoring Report, which provides real-time results applicable to active dredging activities as well as placement and regarding activities at the previous placement site, adjacent to the current proposed placement site. EPA comments at 13. The Corps has therefore not addressed significant questions from the Tribe and EPA regarding how dredging will be not result in significant degradation to U.S. waters.

3. The Corps Has Insufficient Information To Make a Reasonable Judgment That the Proposed 2013-14 Dredging and Disposal Activities Will Comply With the Guidelines.

A Section 404 permit must also be denied if "[t]here does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the[] Guidelines." 40 C.F.R. § 230.12(a)(3)(iv). As stated above, the Corps has not evaluated a

9548 Water quality, and sediment quality; sediment quality

9549 Environmental laws and regulations

reasonable range of alternatives under the DEIS and therefore lacks sufficient information to determine that a practical alternative to dredging exists. The Corps has also not provided sufficient information analyzing the thermal impacts on aquatic species from the creation of shallow water habitat using dredge spoils, or evaluated the impacts of climate change on Snake River water temperatures and how climate change may further affect dredging activities.

Also as stated above, EPA, concluded, and the Tribe agrees, that the Corps did not provide enough information or analysis regarding sediment characterization and quality, raising substantial questions about the Corps' determinations regarding the Corps' interpretations of sediment sources in the DEIS and suitability for in-water placement of dredged material. EPA expressly assigned the DEIS an "Environmental Objection- Insufficient Information." Without this additional information and analysis, the Corps cannot reasonably determine that the disposal activities will comply with the Section 404(b)(1) Guidelines.

III. Conclusion

The Tribe appreciates the opportunity to comment on the Public Notice and requests that the Corps address the Tribe's issues and concerns with the agency's NEPA analysis, and perform a full public interest review, including full compliance with 404(b)(1) Guidelines, before any Section 404 permit is issued. If you have any questions, please contact Michael Lopez, Staff Attorney, Nez Perce Tribe Office of Legal Counsel, at (208) 843-7355.

Sincerely,

Silas C. Whitman
Chairman

Nez Perce

TRIBAL EXECUTIVE COMMITTEE
P.O. BOX 305 • LAPWAI, IDAHO 83540 • (208) 843-2253

March 26, 2013

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, ATTN: Sandra Shelin, CENWW-PM-PD-EC
201 North Third Avenue, Walla Walla WA 99362-1876

By Electronic (psmp@usace.army.mil) Mail

Re: Nez Perce Tribe's comments on the Lower Snake River Programmatic Sediment Management Plan and Draft Environmental Impact Statement

Dear Ms. Shelin:

The Nez Perce Tribe (Tribe) appreciates the opportunity to comment on the Walla Walla District of the U.S. Army Corps of Engineers (Corps) Lower Snake Programmatic Sediment Management Plan and Draft Environmental Impact Statement (PSMP/DEIS).

Since time immemorial the Tribe has used and occupied the lands and waters of north-central Idaho, southeastern Washington, northeastern Oregon and areas of Montana for subsistence, ceremonial, commercial, and religious purposes. In 1855 the United States negotiated a treaty with the Tribe. Treaty of June 9, 1855, with the Nez Perces, 12 Stat. 957 (1859). In Article 3 of this treaty, the Tribe explicitly reserved to itself certain rights, including "the exclusive right to take fish in streams running through or bordering the Reservation," "the right to take fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands." These reserved rights include the right to fish within the project area identified in the PSMP/DEIS and the right to take fish passing through the Lower Snake River.

Salmon, steelhead, sturgeon and lamprey are integral to the spiritual, physical and economic health of the Tribe. The Tribe reveres the fishery and the waters that support the life and sustenance these resources have given, and continue to provide Tribal members. The Snake River corridor is an important migratory route for threatened spring, summer, and fall Chinook salmon and steelhead, as well lamprey and sturgeon. Any activities that potentially threaten these important resources are of great concern to the Tribe.

The Tribe cannot overstate how significant a burden the United States has imposed on the Nez Perce people through the construction and operation of the Lower Snake River and Columbia

River Dams. These structures have contributed to a massive decline in salmon, steelhead and lamprey that have returned to our waters and nourished our people and the land since time immemorial. Nez Perce elders believe the circle of life has been broken and ask us to consider what the consequences of breaking that circle may mean for future generations. For the Nez Perce people, the loss of the sacred Chinook salmon, steelhead, lamprey and other species has meant a loss of our most important food source, and has been directly linked to a decline in the health and welfare of tribal members. The impact to our cultural and spiritual foundation, language, beliefs and way of life is incalculable.

After reviewing the documents, the Tribe does not support the Corps' preferred Alternative 7 because it is a product of an unreasonably narrow purpose and need that relies on dredging while eliminating from consideration viable options such as increased implementation of sediment reduction measures, maintenance of the Lower Snake River navigation channel at the less than 14 feet depth as has been occurring using light-loading of barges, and partial breaching of the Lower Snake Dams. As a result of the narrow purpose and need, the Corps failed to fully evaluate a reasonable range of alternatives. To safeguard and advance the Corps' treaty and trust responsibilities to the Tribe, the Tribe requests that the Corps fully analyze and adopt a new alternative that prioritizes the additional measures above as well as components of Alternatives 2, 3 and 4.

The Corps also needs to perform significant additional analysis of the project's impacts. The PSMP/DEIS fails to analyze the project's impacts on Tribal treaty rights, tribal cultural resources, and socioeconomics. The PSMP/DEIS inadequately analyzes the project's effects on ESA-listed species and lamprey. The economic analysis regarding the costs and benefits of the proposal is inaccurate and incomplete. Additional analysis is also necessary to address the impacts of climate change, as well as impacts from future changes in flood storage contemplated in the Columbia River Treaty.

PROJECT DESCRIPTION

The Corps is proposing to adopt and implement a Programmatic Sediment Management Plan for managing sediment within the Lower Snake River system to meet the authorized project proposes that are affected by sediment deposition. According to the PSMP/DEIS, the purpose of the proposed action is to establish a programmatic framework to evaluate and implement potential sediment management measures to address problem sediment accumulation that interferes with authorized purposes of the Ice Harbor, Lower Monumental, Little Goose, and Lower Granite Dams and their associated locks and reservoirs located on the Lower Snake River (collectively the Lower Snake River Projects or LSRP). According to the Corps, the "authorized purposes" are the following: (1) commercial navigation by reducing the depth of the Federal navigation channel to less than the authorized depth of 14 feet when operating at minimum operation pool; (2) recreation by limiting water depth at boat basins to less than original design dimensions; and (3) fish and wildlife conservation by sediment accumulation interfering with irrigation water intakes, juvenile ESA-listed fish barge access to loading facilities, and fish barge passage through the reservoirs and locks within the LSRP.

In addition to developing a Programmatic Sediment Management Plan for long-term sediment management within the LSRP, the Corps is also proposing and evaluating in the DEIS an "immediate need action" to reestablish, through dredging of approximately 421, 675 cubic yards during the first available in-water work period (December 15-March 1) following the Record of Decision for the PSMP/DEIS, the navigation channel and port berthing areas at the following four locations: Ice Harbor Navigation Lock downstream approach; Federal navigation channel at confluence of Snake and Clearwater Rivers; Port of Clarkston berthing area; and Port of Lewiston berthing area. The dredged materials will be placed in the Lower Granite reservoir, Snake River Mile 116 just upstream of Knoxway Canyon, for in-water disposal to create additional shallow water habitat for juvenile salmonids.

On March 11, 2013 the Corps issued a 30-day public notice proposing to perform maintenance dredging totaling 491,043 cubic yards at the above four locations. The dredging quantity exceeds the amount identified in the PSMP/DEIS by 69,368 cubic yards. The public notice further indicates that the NEPA review required for the proposed maintenance dredging is addressed in the PSMP/DEIS.

The Corps identified seven potential alternatives for the project: (1) No Action (required for evaluation under NEPA); (2) Increased implementation of sediment reduction measures; (3) system management; (4) non-dredging sediment management measures; (5) dredging-based sediment management; (6) system management and non-dredging sediment management; and (7) comprehensive (full system and sediment management measures). Following application of several screening criteria, the Corps decided to further evaluate Alternatives 1 (required under NEPA), 5 and 7. The other four alternatives were eliminated from further evaluation (2, 3, 4, and 6) based on the Corps' assertion that they do not meet the project's purpose and need.

Alternative 5 represents a continuation of the Corps' historical practices of using dredging as the primary tool for managing sediment that interferes with authorized uses of the LSRP. Sediment management would consist of dredging and dredged material management. Alternative 7 provides all available dredging, system and structural measures for the Corps to manage sediments that interfere with authorized project purposes. The alternative includes dredging and dredged material management along with other sediment and system management measures.

Over the long-term, the Corps would monitor sediment in the LSRP. When conditions meet criteria for action, the Corps would initiate review of site-specific conditions, screening of alternative measures, and determine which measure or measures to implement to address sediment accumulation.

GENERAL COMMENTS

A. Treaty and Trust Responsibilities

President Obama's November 5, 2009 Memorandum to the heads of all Federal agencies reaffirming Executive Order 13175 requires all Federal agencies to formulate "an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory

policies that have tribal implications." This document affirms the Corps' legal responsibility to engage in pre-decisional consultation with federally recognized Tribes, an important component of that process. The Corps' adopted *Tribal Policy Principles* further embrace President Obama's directive by committing to "involv[ing] Tribes collaboratively, before and throughout decision making, to ensure the timely exchange of information, the consideration of disparate viewpoints, and the utilization of fair and impartial dispute resolution processes."

Another key commitment of the *Tribal Policy Principles* is that the Corps "will work to meet trust obligations, protect trust resources, and obtain tribal views of trust and treaty rights. Embedded in the *Principles* and available on the Corps' website is a "Trust Responsibility and Consultation Matrix" prepared by the OSD Office of General Council. The document identifies a trust responsibility to "protect 'to the highest degree of fiduciary standards trust lands and water and land habitats that support meaningful exercise of off-reservation hunting, fishing, and gathering rights." The document states: "[w]here the trust responsibility applies, Indian interests cannot be subordinated to the interests of DOD absent overriding legal authority to do so." The document further states that the duty applies when, among other circumstances, "[a] proposed action may affect off-reservation treaty rights [which are] those use and occupancy rights reserved for Indians in a treaty, statute, judicial decision, or E.O. establishing a reservation."

As the Corps is well aware, the Tribe has a longstanding history with this project. The Tribe submitted numerous and detailed comments on the previous iterations of the Corps' sediment management plan describing the historic and contemporary importance of salmon and other aquatic resources to the Tribe and how the dramatic decline in those resources in the wake of the construction and operation of the Lower Snake River and Columbia River Dams have dramatically affected the Tribe in numerous ways. The Tribe also repeatedly reminded the Corps of its responsibilities to protect and advance treaty rights. The Tribe recommended alternatives to dredging such as increased upstream sediment reduction measures, drawdown, light barge loading, operating the navigation channel at less than 14 feet, and partial breaching of the Lower Snake River Dams.

As the Corps is also aware, the Tribe participated in the litigation that resulted in the court enjoining the Corps' plans to dredge in 2002 and 2004. The Tribe also participated in the settlement discussions that culminated in an agreement permitting the Corps to perform a limited, one-time maintenance dredge but with the condition that the agency complete a NEPA analysis on the long-term management of sediment in the Lower Snake River.

On December 21, 2012 the Corps released the PSMP/EIS with a 45-day comment period. By letter to the Corps dated January 9, 2013 the Tribe requested that the Corps extend the comment period a minimum of 45 days to account for the intervening holidays and to facilitate pre-decisional consultation. At the Tribe's request, Corps staff met with Tribal staff in Lapwai to discuss the PSMP/DEIS on February 15, 2013.

Despite the Tribe's extensive previous involvement in the Corps' Lower Snake River sediment management initiatives, including the numerous comments, meetings, and litigation, the PSMP/EIS fails to acknowledge the Tribe's historic ties to the project area and ignores the

cultural, religious, economic and nutritional importance the Tribe attaches to the resources that reside in the project area. The Corps does not describe the 1855 Treaty in any meaningful way, including failing to list it among the statutory authorities it is required to consider in its analysis. The Corps provides no identification of treaty and trust resources that may be affected by the project, and performs no evaluation at all of the project's impacts on treaty rights. The PSMP/EIS also fails to evaluate the Tribe as an affected population for environmental justice purposes, and performs no analysis of the project's socioeconomic impacts to the Tribe. The Corps also provides an inadequate analysis of the impacts to Tribal cultural resources.

There is accordingly no meaningful effort in the PSMP/DEIS to recognize and evaluate the impacts to the myriad Nez Perce Tribal interests in connection with the project. The Tribe expects to see a substantial improvement in this evaluation in the FEIS.

B. Range of Alternatives

1. The purpose and need are impermissibly narrow

NEPA's implementing regulations require that a statement of purpose and need "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. Because the purpose and need determine the range of reasonable alternatives, an agency cannot define the purpose and need of a project in unreasonably narrow terms. *See Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.,* 606 F.3d 1058, 1070 (9th Cir.2010). " '[A]n agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality.' " *Friends of Southeast,* 153 F.3d at 1066 (quoting *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 196 (D.C.Cir.1991)).

The DEIS identifies the purpose of the proposed action is to adopt a PSMP that includes actions for long-term, immediate need, and emergencies for managing sediment that interferes with the *authorized* purposes of the LSRP. DEIS at 1-2. The stated need for the PSMP is to reduce and prevent if possible sediment accumulation in areas of the Lower Snake River reservoirs that interfere with the following federally authorized purposes: (1) commercial navigation by reducing the depth of the Federal navigation channel to less than the authorized 14 feet when operating at minimum operating pool; (2) recreation by limiting water depth at boat basins to less than original design dimensions; and (3) fish and wildlife conservation by sediment accumulation interfering with irrigation water intakes at HMUs, juvenile ESA-listed fish barge access to loading facilities, and fish barge passage access through the LSRP. DEIS at 1-2,1-3.

In assessing the reasonableness of a purpose and need specified in an EIS, courts consider the statutory context of the federal action. *Westlands Water Dist. v. U.S. Dep't of Interior,* 376 F.3d 853, 866 (9th Cir.2004)("Where an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS.").

The DEIS provides statutory context concerning authorized purpose 1 – maintaining the federal navigation channel at 14 feet when operating at MOP - in the Corps Authorities, Directives, and Obligations section. The DEIS states: "[t]he Flood Control Act of 1962 (PL 87-874) mandated the establishment of the navigation channel within the LSRP at 14 feet deep by 250 feet wide at the minimum operating pool level, and provides the Corps with the authority to maintain the channel at those dimensions." DEIS at 1-5. The DEIS further provides: "[b]ased on those authorizing documents and subsequent related Congressional documents, the Corps interprets that Congress intended for the Corps to maintain the channel to provide year-round navigation." *Id.* The DEIS goes on to state that "[i]n 1991, Congress reiterated its intent to provide for navigation in the Columbia and Snake River system (102 Senate Report 80).

The Corps' interpretation of what Congress intended for commercial navigation on the Snake River system is flawed. First, although the FCA requires the federal navigation channel to be established at 14 feet deep by 250 feet wide, the Flood Control Act does not *mandate* the Corps to *maintain* the federal navigation channel at 14 feet when operating at Minimum Operating Pool (MOP). Second, neither the Flood Control Act nor any subsequent Congressional documents support an interpretation that Congress intended for the Corps to maintain the channel at no less than 14 feet at MOP year-round. To the contrary, Congress, in authorizing the Snake River Dams, considered and recognized that navigation may not be available year-round. House Doc. 704, 75th Cong., 3rd Sess. At 9, 39. In addition, the Corps has previously acknowledged time periods when full navigation on the Snake River will not be available. The Corps has also recognized that seasonal light loading has occurred and is occurring on the Snake River. There is therefore no principled statutory interpretation on which the Corps can support a need to *maintain* the federal navigation channel at no less than 14 feet deep at MOP year-round.

2. The PSMP/DEIS does not fully evaluate a reasonable range of alternatives.

The draft PSMP/EIS does not provide a reasonable range of alternatives. NEPA requires agencies to "[s]tudy, develop, and describe appropriate alternatives to recommended courses of action, 42 U.S.C. § 4332(e), and to "rigorously explore and objectively evaluate all reasonable alternatives" to a proposed plan of action that has significant environmental effects. 40 C.F.R. § 1502.14(a) (2000). This is "the heart" of an EIS. *City of Carmel-by-the-Sea v. United States Dep't of Transp.,* 123 F.3d 1142, 1155 (9th Cir.1997). "The existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Citizens for a Better Henderson v. Hodel,* 768 F.2d 1051, 1057 (9th Cir.1985).

The Corps developed a range of management measures that could address identified sediment accumulation problems. The measures fall within four general categories: dredging and dredged material management; structural management, system operations management, and upland sediment reduction. DEIS at 2-3. The Corps then developed twelve criteria to "screen" measures and determine which measures meet the purpose and need and are technically feasible to include in the PSMP alternatives. DEIS at 2-7. Significantly, "maintain[ing] navigation channel at less than 14 feet" was eliminated at this stage because "[it] does not meet purpose and need. The Congressionally-authorized channel depth is 14 feet." DEIS at 2-8.

From these four general categories six alternatives were developed as well as a No Action alternative which is required for evaluation under NEPA. Alternative 2 provides for increased implementation of upstream sediment reduction measures such as streambank erosion control and forest and agricultural practices. Alternative 3 provides for navigation objective reservoir operation, increasing flow velocities to flush sediments, and modifying, relocating, or reconfiguring facilities affected by sediment accumulation. Alternative 4 provides for structural sediment management measures such as weirs, dikes and continued upland sediment reduction measures by the Corps. Alternative 5 involves dredging-based sediment management. Alternative 6 includes system management and non-dredging sediment management (such as continued upland sediment reduction measures). Alternative 7 includes all measures included in Alternative 5 and 6.

The Corps then developed a second level of screening criteria to evaluate these 7 alternatives. These criteria are: (1) alternatives must provide sufficient measures to remedy sediment deposition that interferes with authorized purposes of the LSRP, for both future and immediate needs; (2) alternatives must provide for reestablishing the navigation channel from current conditions to authorized dimensions (14 feet deep by 250 feet wide at MOP throughout the designated navigation channel).; and (3) alternatives must provide the ability to address flood risk at Lewiston and Clarkston. DEIS at 2-32. Applying these additional criteria, alternatives 2, 3, 4, and 6 were eliminated from further consideration because these alternatives did not reestablish the navigation channel to authorized dimensions (14 feet deep) at MOP. DEIS at 2-33.The Corps' preferred alternative, Alternative 7, adopts a "toolbox" approach by including measures included in Alternatives 5 and 6.

By narrowly defining the purpose and need to require maintenance of the navigation channel at *no less* than 14 feet by 250 feet *year-round*, and then applying two levels of screening criteria for the alternatives development that eliminate alternatives which, according to the Corps, interfere with authorized purposes (again maintaining the navigation channel at no less than 14 feet year-round), the Corps has impermissibly limited the range of alternatives it believes it must analyze to just *two* alternatives which both include dredging. These two dredging-based alternatives belie the Corps' assertion that it is stressing a "system based approach" to solve sediment-related problems. Such an excessively narrow range of alternatives for a programmatic document is unreasonable and does not satisfy NEPA.

3. The no action alternative is invalid.

NEPA requires agencies to include a no action alternative in its range of alternatives to be evaluated. 40 C.F.R. § 1502.14(d). Where "no action" involves federal decisions on proposals for projects…the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward." CEQ Forty Questions.

According to the PSMP/DEIS, the No Action Alternative represents "a continuation of the Corps' current operational practices of managing the LSRP through navigation objective

reservoir operations in the lower Snake River, and sediment reduction measures implemented in the Snake River watershed by other agencies and land managers." DEIS at 2-22, 23.

Yet the No Action Alternative as described is not a true no action alternative for several reasons. First, the No Action Alternative is predicated upon the Corps' assertion that the Snake River must be maintained at no less than 14 feet for navigation. As described above, this assertion is based on the Corps' flawed interpretation of the Flood Control Act. The Corps is not *mandated* to maintain the navigation channel at a minimum 14-foot depth for navigation. The No Action alternative is therefore not a valid alternative because it fails to describe a scenario where the Corps does nothing to maintain the 14-foot navigation channel, including no navigation objective reservoir operations.

Second, the No Action Alternative is not a valid alternative because the No Action Alternative includes actions that are explicitly included in the preferred alternative (Alternative 7). According to the preferred alternative, navigation objective reservoir operation and continued upland sediment measures are included in the available "toolbox" of measures. DEIS at 2-31. As a result the No Action Alternative just mirrors measures that are already in the preferred alternative.

In summary, the Corps needs to develop a true No Action Alternative that contemplates the agency not managing the lower Snake River to maintain a 14-foot navigation channel for navigation. The agency also needs to fully evaluate the environmental effects of this No Action Alternative compared with the effects of permitting the proposed activity.

4. The Tribe opposes the preferred alternative and requests the development and full evaluation of a new alternative that protects treaty rights.

The Tribe opposes this preferred alternative for several reasons. First, the Corps states that the purpose of programmatic management is to provide consistency in and a "roadmap" for future project-specific decision-making. The Corps' preferred Alternative 7 does not provide such a "roadmap." Rather, Alternative 7 provides a listing of potential measures that may possibly be implemented, singly or in combination, with little edification on what actually will happen. Rather than a roadmap, Alternative 7 offers confusion and uncertainty regarding the future of sediment management and transportation channel maintenance in the lower Snake River. For example, drawndown is a measure that would, although temporarily, create more natural riverine flow conditions that would aid the downstream migration of salmonids and provide normative conditions for downstream lamprey migration. That is, it would allow the Lower Snake to act more like a river. Absent adequate forethought, planning and preparation for implementation of this type of alternative, the only road map that is apparent is the continuation of channel maintenance dredging.

Second, the preferred alternative does not provide an order or preference in which a measure or measures will be implemented when sediment "interferes with authorized purposes." The PSMP/DEIS only establishes "immediate" and "future" needs as conditions that trigger action and which are virtually indistinguishable. DEIS at 2-22. The immediate need authorizes action

when the federal navigation channel "is less than authorized dimensions at MOP." This is another way of stating the channel must be maintained at 14 feet deep and 250 feet wide. The future needs authorize action when sediment accumulation interferes with an authorized purpose: (1) at the same location more frequently than every 5 years; (2) is anticipated at a location or locations in less than five years; or (3) unanticipated sediment accumulation occurs.

The PSMP/DEIS is supposed to be a programmatic document. Yet it does not identify what measure or measures in the "toolbox" will be implemented to address any of the conditions. Nor do the documents identify any order or preference for how the measure or measures will be implemented. Without a hierarchy or preference guiding how the Corps will select one measure or measures over another to address a "condition," alternative 7 lends itself to reliance on one tool – dredging – that the Corps has historically demonstrated to strongly prefer as a management tool over other, non-dredging options. Accordingly, the Tribe requests that the Corps identify programmatic selection criteria for each measure as well as a hierarchy or order that will establish a fair and transparent decisionmaking framework for determining when, how, and in what order a measure or measures will be implemented.

Third, the preferred alternative does not include operating the Lower Snake River at less than the "authorized" 14 foot deep navigation channel. As stated above, the Tribe maintains that the Corps' has erroneously eliminated this viable measure from consideration based on a flawed interpretation of the Corps' authorizing legislation. The Corps is not *required* to operate the navigation channel at 14 feet deep by 250 feet wide year-round, but is only authorized to do so. The Corps may and has operated the navigation channel at less than 14 feet through a menu of options such as restricting commercial traffic during higher flows or implementing a light-load barging requirement. The Corps needs to include and analyze in detail this viable option either as a stand-along alternative *and* as a measure in the preferred alternative.

Fourth, the preferred alternative eliminates *increased* upland sediment reduction measures consistent with Alternative 2. The preferred alternative limits upstream sediment reduction measures to *existing* levels. The PSMP/DEIS fails to provide any explanation why the preferred alternative cannot incorporate *increased* upland sediment reduction measures rather than just implementing existing measures. The Corps eliminated Alternative 2 from consideration because "sediment reduction from upland sourced would not, by itself, be effective at reducing sediment accumulation that interferes with authorized purposes of the LSRP, either for future or immediate needs." DEIS at 2-34. Yet the preferred alternative incorporates other measures, including dredging, to address what the Corps characterizes as an immediate need to maintain the navigation channel at 14 feet year round. Therefore, the Corps' reason for eliminating Alternative 2 as a stand-alone alternative does not apply to the preferred alternative.

Fifth, the preferred alternative does not incorporate partial dam breaching of the four Lower Snake River dams. As you know, the Tribe has long advocated for partial dam breaching is by far the most consistent with the United States' obligation to protect treaty rights and support Tribal self-determination. Dam breaching:

- Best increases survival of anadromous fish migrating through the area of the four lower Snake River dams;
- Increases the area of spawning and rearing for Snake River fall Chinook;
- Is the only alternative that addresses restoration or natural or near natural riverine conditions that would produce myriad positive influences on natural processes and fish and wildlife;
- Is the only alternative that enhances migrating conditions for lamprey and white sturgeon;
- Improves water quality; and
- Is the only alternative that would improve fish migration rates and rates of juvenile anadromous fish through the existing reservoir pool areas.

The Tribe requests that the Corps include dam breaching as a viable measure in the preferred alternative and as a stand-alone alternative for detailed environmental analysis.

C. The Corps Has Not Performed the Requisite Hard Look on the Project's Impacts to the Environment

Through the NEPA process, a federal agency must "take a 'hard look' at the potential environmental consequences of the proposed action." Oregon Natural Res. Council v. Bureau of Land Management, 470 F.3d 818, 820 (9th Cir. 2006) (internal quotations omitted). NEPA's regulations require that an EIS include a discussion of direct, indirect, and cumulative environmental impacts of the proposed action. Direct impacts are "caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Indirect impacts are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Id. at § 1508.8(b). Cumulative impacts result when the "incremental impact of the action [is] added to other past, present, and reasonably foreseeable future actions" undertaken by any person or agency. Id. at § 1508.7.

The overall organization of the Environmental Effects of Alternatives section needs improvement. The section refers interchangeably to "direct effects" and "effects" but does not clearly distinguish direct from indirect impacts. The Tribe recommends that the section be reorganized to include, by alternative, a Direct Impact and Indirect Impact Sections so that the reader clearly understands how the Corps is characterizing those impacts.

1. The PSMP/DEIS fails to adequately analyze the direct impacts of each measure in the preferred alternative.

Section 4 describes the environmental effects of Alternative 5 and the preferred alternative 7. This section needs significant improvement. Currently the document does not adequately evaluate the direct, indirect and cumulative impacts of each of the 15 measures identified in Alternative 7. The Tribe recommends that the Corps take each of the 15 measures and evaluate their direct, indirect, and cumulative impacts individually each of the affected environment components. First, the PSMP/DEIS provides little or no evaluation of the impacts of several measures on the affected environment. For example, impacts of raising the levees to manage

flood risk is not evaluated for aquatic or terrestrial species. Agitation to suspend sediments is not evaluated.

Second, the PSMP/DEIS lumps together installation and maintenance of bendway weirs and dikes, dike fields and in-reservoir trapping systems based on broad assumptions about their impacts and analyzes them collectively, rather than individually. *See* DEIS at 4-12 ("Because actions associated with structural sediment management measures and *some* system management measures involve *many* of the same impacts such as in-water work, use construction equipment, and localized substrate disturbance and increased turbidity, they will be discussed together…")(emphasis added). Each measure is different and therefore needs to be fully evaluated individually.

Third, in the instances where the Corps does evaluate impacts from a measure or measures, the analysis is inadequate. The Corps, for example, states that "the process for adding in-stream structures (bendway weirs, dike fields, or in reservoir sediment trapping systems) would alter flow patterns, sediment, and adversely affect water quality by increasing stream turbidity." DEIS at 4-12. These vague statements do not provide the reader with any meaningful sense of the *degree* to which these measures will affect the environment. How much will water quality be affected? What are the impacts to the environment of altering flow patterns? The result of this piecemail and cursory evaluation is an inadequate examination of the preferred alternative's 15 measures and accordingly does not comply with NEPA. NEPA requires the Corps to provide in the PSMP/DEIS a comprehensive and accurate evaluation of the impacts of the project on the environment. This evaluation cannot be deferred to a later date or included in some theoretical site-specific proposal that may or may not occur during the life of the PSMP.

2. Creation of In-Water Habitat for Fish

The PSMP/DEIS states that "[a]n important element of fish use of the Lower Snake Reservoirs is the availability and use of shallow water habitat. DEIS at 3-5. The document also states: "Because shallow water habitat is considered the most productive habitat in aquatic ecosystems in terms of supporting the largest populations and most diverse array of species, the aquatic productivity of the reservoirs could potentially be enhanced by increasing the amount of shallow water habitat." *Id.* Based on research the Corps has performed within the Lower Snake River, the Corps determined that shallow-water disposal of dredged material has positively created resting and rearing habitat in the Lower Snake River reservoirs for juvenile salmonids, primarily juvenile fall Chinook.

The research the Corps references in support of its conclusion that creating shallow-water habitat benefits natural subyearling fall Chinook does not state whether Clearwater juveniles would benefit. This is an important consideration because the portion of fall Chinook spawning in the Clearwater consistently makes up about 1/3rd of the naturally spawning population of NOAA's Snake River Fall Chinook Evolutionarily Significant Unit (ESU). The off-spring from naturally spawning fish in the Clearwater emerge from the gravel at a later date than those spawned and incubated in the Snake River (or those released from a hatchery) because the water temperature

is cooler than that in the Snake. Consequently, this emergence timing is an important biological characteristic for a large portion of the ESU.

When the juveniles from the Clearwater begin their outmigration in late June and July, they encounter a thermal block in the Snake River and tend to congregate just upstream of the confluence in the vicinity of the Port of Lewiston. Consequently, any analysis of benefits of the project on fall Chinook juveniles, including the purported benefits of creating shallow water habitat using dredge spoils, must take into consideration the specifics of the outmigration timing and behavior of those fish reared in the Clearwater River. Because of the contribution of the Clearwater River population to the ESU as a whole, this information is important. The Tribe is concerned that juveniles reared in the Clearwater River which emerge at a later date due to the cooler water, enter the warmer Snake River and seek deeper water for rearing and not necessarily the shallow water habitat. Given this difference in behavior it remains unclear whether Clearwater juveniles will derive any significant benefit from the creation of shallow-water habitat from dredge spoils. The Corps should provide additional information or if necessary perform additional studies addressing this important question.

The Corps also needs to provide additional information concerning another impact on juvenile fall Chinook. There is inadequate analysis concerning the impacts of predation on juvenile fall Chinook salmon that may use this new shallow habitat. There is also a lack of information regarding the impacts to sturgeon due to the decrease in mid-depth habitat for sturgeon. The Corps also needs to perform a better analysis of the thermal impacts, including climate change, on aquatic resources caused by the creation of shallow water impacts.

3. Climate Change

The PSMP/DEIS needs to actually analyze the impacts of climate change. The CEQ's draft guidance suggests an environmental impacts statement include an analysis of (1) cumulative emissions over the life of the project; (2) measures to reduce GHG emissions, including consideration of reasonable alternatives; and (3) a discussion of the link between such GHG emissions and climate change.

Section 3.9 of the PSMP/DEIS provides some discussion of regional climate conditions in the context of air quality. The section states that "[t]he study area is generally rural with relatively few major sources of air pollution emissions." DEIS at 3-88. The document goes on to identify the major GHG gasses in the region and the sources of GHG emissions in the study area. DEIS 3-89 to 91. However, there is no analysis concerning the cumulative emissions over the life of the project, measures to reduce GHG emissions, or a discussion of the link between such GHG emissions and climate change.

Warming of the global climate is unequivocal. Evidence includes increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level. ISAB 2007. Eleven of the last twelve years (1995 -2006) rank among the 12 warmest years in the instrumental record of global surface temperature (since 1850). *Id.* The linear warming trend over the last 50 years (0.13 +/- 0.03˚C per decade) is nearly twice that for the last 100

years. *Id.* The total global average temperature increase from 1850 – 1899 to 2001 – 2005 is 0.76 +/- 0.19°C. *Id.*

Climate records show that the Pacific Northwest has warmed about 1.0 °C since 1900, or about 50% more than the global average warming over the same period. *Id.* The warming rate for the Pacific Northwest over the next century is projected to be in the range of 0.1-0.6° C/decade. *Id.* Climate change will result in the following:

- Warmer temperatures will result in more precipitation falling as rain rather than snow
- Snow pack will diminish, and stream flow timing will be altered
- Peak river flows will likely increase
- Water temperatures will continue to rise

Id. These changes will have a variety of impacts on aquatic and terrestrial habitats in the Columbia Basin. The Corps needs to identify and evaluate how the projected climate change may affect the project area over the life of the project. Although the Corps did reference climate change in the context of contributing sources of sediment from wildlife, there is no analysis of climate change impacts to Snake River water temperatures. Regional climate models show increasing temperatures in lower and transitional elevation areas such as the proposed project area, and thermal models should be employed to ascertain the cumulative effects of creating a number of shallow water deposition areas. Climate change impacts should also be fully evaluated regarding water quantity and quality, sediment production and deposition, and impacts to ESA-listed species or other aquatic life.

D. Indirect Impacts

Agencies conducting NEPA review must consider the indirect effects of the proposed project. Indirect effects are those effects "caused by the [agency] action [that] are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Such effects "include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." *Id.*

As a general matter, as mentioned above, there is no Indirect Impacts section in the PSMP/DEIS to refer to. In fact, the Tribe identifies very few instances where indirect impacts are even explicitly identified in the document. Failure to identify and fully evaluate indirect impacts in the EIS violates NEPA. The Corps needs to develop a new section, clearly labeled Indirect Impacts, for each alternative.

1. The Corps needs to analyze the indirect impacts of increased barge traffic facilitated attendant to the project.

Table 4.2 labeled "Reasonably Foreseeable Future Actions" identifies an impact to urban land uses that will "maintain and potentially minimally expand existing urban areas." DEIS at 4-63. Under the Socioeconomics Section, the document states that "…the Pacific Northwest wheat

forecast for 2011 is strong and world demand is growing, which is likely to result in substantial cargo volume growth." DEIS at 3-47. Similarly, under Section 4.5, the document concludes that "[s]ediment and system management measures…would generally have a long-term indirect positive effect on regional economies by providing for continued commercial navigation and movement of commodities, providing options for commodity shippers, and maintaining acceptable levels of flood protection in Lewiston, the result would be positive long-term benefits to the communities protected by the levees."

Given these pronouncements points to economic growth in the region the project will facilitate, such as "substantial cargo volume growth" and "potentially minimally expand existing urban areas" there is no accompanying identification of the indirect impacts of increased barge or other boat traffic to and from the area. The Corps needs to identify and evaluate this information as an indirect (and possibly cumulative effect) in the document.

One of the likely indirect effects caused increased barge traffic on the Snake River System is the impact to Tribal treaty fish and fishing. Increased barge and other boat traffic can result in increased fish mortality caused by entrainment, wake stranding, and other causes. Regarding treaty fishing, increased barge and boat traffic to and from the Snake River System can interfere with Tribal treaty fishing on the Columbia River. Nez Perce fishers engage in gill-netting on the Columbia mainstem. More boat traffic to and from the Snake River can interfere with the nets or prevent treaty fishers from placing their nets safely on the river.

The Corps also needs to evaluate the socioeconomic impacts of the project on transportation industries that do not rely on the LSRP to move their goods to and from market. Section 3.5.4 acknowledges that "[t]he study area rail system is integrated with and competes with the barge transportation system…particularly with respect to shipments of grain." Section 3.5.5 states that "…roads and highways have become the primary mode of transport in the region," noting also that "trucks carry a significant volume of grain to the region." DEIS at 3-51. Based on this acknowledged relationship, facilitating barge shipments may negatively affect shipments by rail and truck but this impact has not been identified or evaluated at all.

E. Cumulative Impacts

Cumulative impacts are "the impact[s] on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency…or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.27(b)(7).

As stated above, the Corps needs to identify and fully evaluate the impact of increased barge traffic and commodity shipments on growth-inducing patterns, fish, Tribal treaty fishing and socioeconomics.

The Corps also needs to evaluate the cumulative effects of implementing multiple measures from the "toolbox" over time. Currently the PSMP/DEIS evaluates the measures' impacts

individually. However, the document acknowledges that a measure *or measures* may be implemented from the toolbox to address an immediate or future need. No analysis has been performed to determine what the incremental effects would be of applying more than one measure simultaneously or close in time.

1. Columbia River Treaty

The Columbia River Treaty is a 1964 agreement between Canada and the United States on the development and operation of dams in the upper Columbia River basin for power and flood control benefits in both countries.

As the Corps is aware, the United States and Canada are reviewing the treaty before the 2014 opportunity for notice for earliest termination. One of the key topics under negotiation concerns the called upon storage operations. Under the current treaty, the U.S. may call upon up to approximately nine million acre feet of flood storage in Canada. Changes to the 2024 treaty, however, may condition calling upon Canadian flood storage space only after effective use of U.S. flood storage capacity. This condition may likely require maintaining storage capacity at Dworshak Dam over other uses such as fish and cultural resources. In an average flow year, for example, Dworshak reservoir volumes would need to be dropped to accommodate for flood control. This drop in volume will likely translate into lower than average flows in the Snake River in April, May and into the summer. As a result, Snake River fall Chinook may have less water available for rearing and outmigration. Less water in the Snake River system, in conjunction with possible continued operation of the reservoir pools at MOP +1 or +2, may negatively affect Snake River juvenile salmon. This and other scenarios relating to changes in the Columbia River Treaty during the life of the project are not identified or evaluated in the PSMP/DEIS and should be fully analyzed.

F. Environmental Justice

A Presidential memorandum accompanying Executive Order 12898 cites the NEPA process as an opportunity for agencies to address the environmental injustice of disproportionate impacts. The CEQ also published guidance for environmental justice analyses to determine any disproportionately high and adverse human health or environmental effects to low-income, minority, and tribal populations. One of these principles is to "recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed action."

Currently, the Nez Perce Tribe harvests less than one percent of traditional salmon harvest levels. Traditional roots and berries are becoming increasingly rare. The decimation of salmon runs and disappearance of other traditional foods have seriously affected the Tribal economy. Today, Tribal members face a poverty rate of almost 30% and winter unemployment rates of 62%. The draft PSMP/DEIS find that there are not disproportionate impacts of the project on the Tribe or its members. Any impacts on salmon, steelhead, lamprey or other trust resources, will have a disproportionate impact on the Tribe due to their reliance on fish and the importance of fish to

Tribal culture, spirituality and economy. Tribal members consume a substantially higher rate of fish than the non-Tribal communities.

G. Socioeconomics

PSMP/DEIS excludes economic analysis of the impact of the project on the Nez Perce Tribal economy and the health and welfare of its people. The socioeconomic analysis is flawed because it is limited to counties that encompass the project area and does not consider social and economic factors unique to the Tribe and its treaty rights and resources, which extend outside of the county areas analyzed.

Federal agencies are also required to develop methods to ensure that unquantified and environmental amenities and values will be taken into account in decision-making. 42 U.S.C. § 4332(2) (B). The PSMP/DEIS does not provide a complete or accurate accounting of the costs and benefits of dredging with respect to maintaining the navigation channel at 14 feet by 250, as well as access to port berthing areas. The Corps also does not evaluate the costs of dredging and barging with other transportation such as trucking and rail.

The PSMP DEIS also does not contain any analysis evaluating whether the preferred alternative even makes economic sense at a local or regional scale. The Corps possesses substantial information assessing the economics of river navigation, yet none of this information is provided or evaluated in the context of the project. The preferred alternative may result in greater socioeconomic costs than benefits. The reader does not know the answer to this question because the Corps has failed to address it as a socioeconomic consideration. The available information in the PSMP DEIS suggests that the costs of dredging alone may greatly outweigh any perceived benefits captured through facilitating barge, rather than rail or truck, traffic.

H. Cultural Resources

The Tribe is deeply concerned about the project's effects on Nez Perce cultural properties. The PSMP/DEIS acknowledges the existence of numerous known archaeological sites within the project area. The Tribe has determined that the Corps' survey work to date does not adequately cover the project area and therefore the agency's conclusions about the nature and extent of possible impacts is based on incomplete information. The Tribe is also concerned that the Corps is speculating about impacts on tribal historic properties without consulting in advance with the Tribe.

SPECIFIC COMMENTS

- Increased predation to Snake River fall Chinook

  Draft EIS states that shallow water deposition will provide beneficial habitat for juvenile fall Chinook (Draft EIS at 4-8 and Appendix H at 13) while concurrently referencing increased fish species diversity and abundance at shallow water habitats, including high quantities of smallmouth bass (Draft EIS at 3-2, 3-5, 3-21 and 3-22).

The 2001 USACE Dredged Material Management Plan for Lower Snake River Reservoirs (http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA412805) noted that experimental in-water disposal of dredged material created shallow water habitat in Lower Granite Reservoir that was utilized by subyearling Chinook and *several introduced fishes, considered game fishes* (page K-ES-2). This document states that subyearling fall Chinook survival may be compromised when using shoreline habitat as these areas are shared with a number of predators (page K-6).

A 2010 USFWS Washington state study partially funded by USACE (http://www.fws.gov/wafwo/fisheries/Publications/Pred_tracking_LWSC_final_report_Sept2010.pdf) found that smallmouth bass primarily used 2-4 m deep water but also positively selected 0-2 m depths (page 20) and commonly used open areas with silt and sand/silt substrate (page 27).

The Draft EIS does not provide analysis of avian predation or increases in piscivorous predation resulting from creating shallow water adjacent immediately upstream of Knoxway Bay, a large backwater which would appear to provide the highest quality largemouth bass and crappie habitat in the reservoir as well as the highest quantity of perching structure for double-crested cormorants

- The use of dredge material to create shallow water habitats may increase the amount of available habitat for juvenile fall Chinook. However, it will decrease the amount of mid-depth habitat used by sturgeon. Further assessment of the availability of mid-depth habitat and sturgeon is necessary.

  The DEIS at 3-21 notes that white sturgeon densities surveyed near proposed deposition zone were significantly higher than those of other mid and lower reservoir survey locations while acknowledging that shallow water deposition would potentially reduce the amount of mid-water bench habitat used by white sturgeon (page 4-15).

- There are potential concerns regarding elevated summer water temperatures:

  The DEIS at 4-35 states that summer water temperatures may increase at shallow water deposition sites but are not anticipated to be significant. The DEIS does not analyze thermal impacts, however, instead providing irrational and flawed justification for anticipated lack of impact (page 4-35).

  Conversely, the 2001 USACE Dredged Material Management Plan for Lower Snake River Reservoirs states that creation of shallow water habitat could increase the availability of warmer near-shore waters, potentially resulting in enhanced growth and higher survival for resident game fish and, possibly, subyearling Chinook (page K-17).

  More detailed discussion about elevated summer water temperatures is provided in Attachment A.

- While above listed impacts may be found to be relatively insignificant for the proposed shallow water deposition of a 26 acre area, information (and lack of same) provided for Preferred Alternative options may suggest that dredging be identified for regular implementation. Given that the Corps' 2001 Dredged Material Management Plan proposes six additional LGR disposal sites totaling 1,022 acres, future impacts on salmonid predation, sturgeon habitat and temperature could be highly significant.

- Figure 3-1 describing typical migration timing of anadromous salmonids needs to be revised to cover the complete migration period. Juvenile spring/summer Chinook migration period needs to be extended. Juvenile fall Chinook are migrating/present all year. Coho adult migration can likely be initiated in September not August. Steelhead adults are present all year.

- Description of fall Chinook redd distribution on page 3-10 should be revised to acknowledge that 30% of the redds occur in the Clearwater River.

- Coho salmon description on page 3-13 states the 1995 reintroduction was done "in cooperation with USFWS and IDFG". This should be deleted as the effort was a NPT program with actual objection by IDFG.

- Juvenile lamprey may be present in dredging areas. Monitoring of dredged materials for juvenile lamprey should be required.

- Regarding other issues related to lamprey:

  Regarding sampling for presence/absence of larval Pacific lamprey in the LSRP, the following is stated (Section 3.0, Affected Environment 3.1, Aquatic Resources):

  "In response to concerns regarding potential impacts to juvenile Pacific lamprey as part of potential sediment management actions, a minimally obtrusive electroschocking sled with an optical camera was developed in 2011 to survey for presence or absence of juvenile Pacific lamprey. Arntzen et al. (2012) conducted surveys at 24 sample sites within the lower Snake River to determine presence of juvenile Pacific lamprey including locations where sediment accumulation is interfering with commercial navigation (Clarkston Upper and Lower, RM 138), past dredge disposal sites, and reference sites. No lamprey were observed at any of the 24 sample sites during either of the two sample periods in late July and September 2011. It is plausible that juvenile lamprey were present but not observed with this electroshocking sled as it was recently developed for this specific objective and had a limited testing period prior to deployment."

  The Tribe's comment is that:

  Rather than apply the experimental, untried electro-fishing/optical camera approach, using the method and statistical treatment employed by Jolley et al. (2012), including the

Generalized Random Tessellation Stratified (GRTS) sampling approach, would have made more sense. Jolley et al. (2012) was able to confirm that larval Pacific lampreys occupy Bonneville Reservoir, a larger body of water than Lower Granite pool. Therefore, it is an understatement to say that," It is plausible that juvenile lamprey were present but not observed with this electro-shocking sled as it was recently developed for this specific objective and had a limited testing period prior to deployment." Actually, the results of the survey are meaningless and would errantly be used, even by suggestion, as evidence that larval Pacific lamprey are absent in the LSRP.

The narrative also states:

"However, while juvenile lamprey are often found in silt/sand substrate (Arntzen et al 2012), it is unlikely that juveniles are present in moderate or high numbers within the reservoirs of the lower Snake River due to a paucity of available rearing habitat and relatively low expected abundance of juveniles. Juvenile lamprey typically have a patchy distribution related to other environmental variables such as water depth and velocity, light level, organic content, chlorophyll concentration, proximity to spawning area and riparian canopy (Moser et al. 2007).

The Tribe's comments are:

Jolley et al. (2012) offered that the reservoirs created by many dams on the Columbia River may create habitats (e.g., relatively slower velocity, increased sediment deposition) that did not exist prior to dam construction or were likely less abundant. Larval lamprey may use these areas at a disproportionately higher rate than they did prior to dam construction. A plausible hypothesis was posed that detection rates of larval lamprey would increase in the mainstem Columbia River below rivers known to produce larvae, as the mainstem accumulates larvae from the tributaries. Further, the Clearwater River is a known producer of Pacific lamprey larvae and macrophthalmia. Annual releases of adult Pacifc lamprey have occurred since 2007 in several major Clearwater tributaries as part of the Nez Perce Tribe translocation initiative (Ward et al. 2012). Ward et al. (2012) concludes that results suggest that translocation of adult Pacific lamprey have resulted in increased spawning in recipient subbasins, as evidenced by increases in number and distribution of ammocoetes from preprogram conditions. Maintenance dredging areas are in close proximity to the mouth of the Clearwater River, and consistent with the Jolley et al. (2012) hypothesis, the likelihood of larvae presence and detection rates (using suitable methods) in this area should be relatively high.

The Tribe's suggestion is that, based on the above comments, the narrative and assessment of potential impacts to Pacific lamprey need to be redrafted accordingly.

- "Over the long-term, the Corps would monitor sediment in the LSRP. When conditions meet criteria for action, the Corps would initiate review of site-specific conditions….." pg ES-11. In the staff-to-staff meeting, Corps staff informed us their own internal triggers had been met

that dredging alone was not the answer to the sediment issues, yet the EIS only looks at dredging.

- Sediment input is suggested to be at the highest since 1970. ACOE staff suggests long bankfull events route more sediment than short peak flood events. ACOE ran model simulations of 50 years and suggest the bed level would vary from 1 ft to over 15 ft. Yet in staff to staff when asked if the cross-section data showed the river had reached equilibrium they felt it had reached this point. So is the section at equilibrium or will it continue to fill in?

- Cumulative Effects (pg. 4-66). The Corps will continue to dredge but never address where future dredging spoils will be placed and potential impacts.

- The Tribe's ultimate goal is to have the lower Snake dams breached. As such, deposition of dredged materials should be done in manner that will preclude their downstream transport under natural river conditions (either remove from river or placed in stream well outside of historical river channel).

1) Section 3.4.1 – "Archaeological resources, historic buildings and structures, and traditional cultural properties that have been evaluated on the basis of specific criteria and ***found eligible for the National Register of Historic Places are referred to as historic properties.***"

   Is this list comprehensive? The term "historic properties" does not apply only to evaluated resources.

2) 3.4.1.1 – are the lists of archaeological resources meant to be definitive? In the discussion of historic resources, ACEWW must acknowledge that Tribal resources may also be historic (i.e., post-contact).

3) 3.4.1.2 – The section heading and subsequent repeated phrase "historic property of religious and cultural significance" is incorrect. The language in NHPA is "historic property of cultural and religious significance TO INDIAN TRIBES." The document appears to combine HPCRSIT and traditional cultural properties (TCP), which are defined in National Register Bulletin 38. These are related but separate classifications, and the document uses the definition of TCP to discuss HPCRSITs. ACEWW needs to add a section for TCPs.

   Remove the word "aboveground" from the definition for historic buildings and structures.

   This section implies that historic themes define which resources are valid. Whose themes? Is there a list? Is the list static? Themes are important, but not all NR eligible resources may fit into existing themes.

4) 3.4.2 – p 3-36, paragraph 2 – "The Confederated Tribes of the Yakama Reservation, Confederated Tribes of the Umatilla Reservation, the Confederated Tribes of the Colville

Nation, the Nez Perce Tribe, and the Wanapum Band have interests in ***traditional resources*** in this area."

Define this term, as I'm not sure what it means. Are these treaty resources, TCPs, HPCRSITs, etc.?

p 3-36, paragraph 5 – "The Lower Snake area contains the type sites for phases identified as a foundation of the cultural chronology: Windust Cave, the Tucannon site, and the Harder site. The earliest dates in the region come from ***Marmes Rock shelter and the Granite Point (10,000-9,000 years ago), Windust Cave (before 5,000 years ago), and Ash and Burr Caves (8,000 years ago)."***

These are not the oldest sites in the region. Hatwai and Lower Salmon River sites are older, and well known.

p 3-37, paragraph 1 – "In 1948 the Columbia Basin Project of the River Basin Surveys conducted an intensive reconnaissance of Ice Harbor, Lower Monumental, and Lower Granite Reservoirs as well as the Hells Canyon Dam area."

This survey took 2 weeks for over 100 miles of river shoreline. This was not an "intensive survey" by contemporary standards, and the results of the survey should not be regarded as authoritative or conclusive.

p 3-37, paragraph 2 – "Salvage excavations were undertaken at a number of places along the Snake River and on major tributaries, including the Palouse River and Alpowa Creek. ***Most of the data was never formally reported and many of the assemblages were not analyzed."***

This is true, so it is difficult to use the excavation results as baseline data, or draw many conclusions about the archaeological record or Columbia Plateau cultures and\or cultural change from the excavation data.

p 3-37, paragraph 7 – "Most areas with high potential for cultural resources in the lower Snake River portion of the study area were inundated by reservoirs associated with the four dam projects on the Lower Snake. Cultural resource sites in these areas may contain both prehistoric and historic period components. The areas with high potential for cultural resources include mesa tops and overhangs, talus slopes, confluences, tributary streams, springs, terraces, alluvial fans, flood channels, and channel bars."

This is an accurate statement, but it is unclear what its relevance is to the PSMP or discussion of its effects on cultural resources.

p 3-39, paragraphs 3 and 4 – "Ninety-three archaeological sites have been identified within the ***Little Goose study area. Two sites have been recommended potentially eligible for the NRHP and reevaluation of other sites is being initiated.***

AA total of 159 archaeological sites have been identified within the ***Lower Granite study area.*** Seventy-six of these are inundated. ***Three sites have been determined eligible for NRHP listing and two have been recommended potentially eligible.***"

5) 4.4.1 – "Historic buildings, including the dams, would not be affected by maintaining pool levels at the navigation objective."

Maintaining pool levels might not cause *further impacts,* but will not undo the existing impacts of the project.

6) 4.4.2.1
p 4-27, paragraph 3 - "Dredging and the disposal of dredged material also have the potential to disturb values associated with historic properties of religious and cultural significance to Indian tribes. The ***Corps recognizes a number of these types of sites, many of which were inundated when the reservoirs associated with the LSRP were filled.***"

What site type does the Corps recognize? Are there site types that the Corps does not recognize?

p 4-27, paragraph 4 - "One other aspect of dredging that has the potential to affect historic properties is the disturbance of secondary deposits of archaeological material that may occur within sediments identified for dredging; including, potentially, human remains. Although the secondary deposition of the archaeological material likely means it retains no archaeological value, it may have traditional religious and cultural significance, especially in the case of human remains. ***For this reason, in-water disposal of dredged material is preferred as it ensures that the material remains in the river, in a secondary depositional environment.*** However, in shallow areas where dredged material may be placed for beneficial use, material placement and contouring and anchor lines also have the potential to disturb or bury inundated sites."

The Corps cannot say this without consultation with the Tribe. At this time, this is the opinion of the contractor and maybe the Corps.

p 4-28, paragraph 1 – "Placement of fill has the potential to bury archaeological sites. This may entail some beneficial protection; however, the chemical effect of burying sites is not well understood. ***Reuse of fill in conjunction with habitat enhancement may have beneficial effects for historic properties of religious and cultural significance to Indian Tribes.***"

The Corps should not say this without consultation with all the Tribes with interest in the Lower Snake River. At this time, this is the OPINION of the contractor and maybe the Corps.

7) 4.4.2.2 – p. 4-28, paragraph 5 – "***some dredging would be done in close proximity to archaeological sites, but should not directly impact any of them.***"

   How can the Corps guarantee this?
   p 4-28, paragraph 6 – ***"In Idaho, two locations would be dredged. Each location has a portion of an archaeological site included within the study area but, again, it is not anticipated that dredging activity would impact cultural properties because both locations have been previously dredged several times to the same depths proposed for the near-term maintenance dredging actions."***

   Is the Corps asserting that existing impacts result in no effect to historic properties?

8) 4.11.2.1 – p 58, paragraph 1 – "Dam building on the Snake River system has resulted today in 17 dams on the mainstem of the Snake River and more than 20 dams on tributaries, ***though most are outside the cumulative effects area*** (USACE 2005)."

   What is the area of cumulative effects? How did the Corps determine this area? Was it done in consultation with the Tribes? FCRPS does NOT have an agency approved APE for either direct or indirect effects.

Thank you again for the opportunity to provide comments on the PSMP/DEIS. The Tribe looks forward to government-to-government consultation with the Corps on this matter prior to a final decision so that the Tribe's issues and concerns can be fully explored between our governments. If you have any questions, please contact Michael Lopez, Staff Attorney, Nez Perce Tribe Office of Legal Counsel at (208) 843-7355.

Sincerely,

Silas C. Whitman
Chairman

U.S. Army Corps of Engineers, Walla Walla District
March 26, 2013

Attachment A

Concerns regarding elevated summer water temperatures

Draft EIS claims that dredging activities are not likely to impact water temperature but, in lieu of analysis, provides flawed and obfuscating justification.

Draft EIS Appendix G at 5, *"The following is a summary of the participants' identified issues and comments...There are concerns about the possible relationship between dredged sediment deposition in the Lower Snake River and habitat/fisheries impacts in the shallow water areas, including water temperature increases."*

Draft EIS at 4-5, *"Dredging and dredged material placement would not cause effects on water temperature or dissolved oxygen because activity would typically take place in cold weather during the in-water work window."*

Draft EIS at 4-35, *"Dredging is not anticipated to affect water temperatures. However, water temperatures at in-river placement sites may slightly increase from current conditions in the summer. Water overlying the shallow habitat would likely exceed 68°F (20°C) during summer days, but may also cool off more at night relative to the open-water. Predicting the thermal effects of these opposing actions in the long term is hampered by uncertainty related to issues of vegetation that could become established nearby and create shading, global warming, and runoff volume. However, considering the small incremental change in volume of shallow water, greater cooling of shallow water at night, effects of wind and wave action on mixing near shore, and advection of water through these areas, the overall changes to the thermal budget of the reservoir are not anticipated to be significant."*

...Water overlying the shallow habitat would likely exceed 68°F (20°C) during summer days, but may also cool off more at night relative to the open-water. Predicting the thermal effects of these opposing actions in the long term ...
A number of thermal models are available to predict diurnal effects on water temperature. In general, daytime water temperatures are influenced by absorption of both long and short wave radiation throughout the upper water column and substrate (when water is shallow and clear enough) while nighttime effects are primarily influenced by long wave radiative transfer at the air-water interface. As seasonal shifts in solar insolation produce greater heating effects in summer than winter, decreased depths in streams and rivers generally result in higher summer water temperature and lower over-wintering temperatures; diurnal effects do not typically 'equalize' or 'cancel out' thermal impacts within summer or winter.

...is hampered by uncertainty related to issues of vegetation that could become established nearby and create shading... Riparian shading of the deposition zone is a non-factor due to, among other things, 10 to 20' basalt escarpments which comprise the majority of bank adjacent the proposed deposition zone. Draft EIS at 3-23, *"The study area passes through steppe and shrub-steppe plant communities (Franklin and Dyrness 1973; Daubenmire and Daubenmire 1984)."* and *"A number of factors contribute to the lack of extensive riparian areas along the*

lower Snake River (Corps 1992, 2002a). The steep shorelines associated with project reservoirs are primarily responsible for limiting development of riparian communities in the study area. Furthermore, extensive grazing (Lewke and Buss 1977), the expansion of railroads, arid climate, and the inundation of the low-lying flood plain by dams have limited riparian vegetation to narrow vegetation corridors and backwater areas."

Overview of proposed deposition zone

Shoreline along proposed deposition zone

…global warming…Draft EIS at 3.9 states *"The study area for the discussion related to climate change and GHG is considered to be the entire planet as climate change issues are global in nature..."* Large-scale models for the Pacific Northwest predict that global warming will increase summer air temperatures and exacerbate thermal issues extant within Lower Granite Reservoir.

…and runoff volume. Does USACE suggest that, contrary to climate change modeling, summer runoff volume may increase and minimize thermal impacts? Flow augmentation is addressed within EPA's Temperature Simulation of the Snake River Above Lower Granite Dam Using Transect Measurements and the CE-QUAL-W2 Model, "*During flow augmentation, measurements and simulations indicate that a stable surface layer sets up beginning at approximately River Mile 125 to 135 and extends to* [sic] *downstream to the dam at River Mile 107. Flow augmentation appears to have little effect on temperatures within this surface layer; in fact, augmentation may cause temperature increases at the surface.*"

…effects of wind and wave action on mixing near shore… Data provided through EPA's Temperature Simulation of the Snake River Above Lower Granite Dam Using Transect Measurements and the CE-QUAL-W2 Model, along with simulations developed through a thermal model developed by the USACE, reported that summer water temperatures four miles above the action area (RM 120) remained relatively consistent to a depth of at least 30 feet. As such, wind on wave mixing actions may increase summer water temperatures through increased exposure to hot wind/air, but cooler hypolimnion (deep-water) layers will not be accessed.

…and advection of water through these areas… Advection (and, through diffusion, convection) will serve to distribute waters warmed in shallow habitat throughout the lower reservoir, but it will not prevent water temperatures from increasing within the deposition zone.

Draft EIS at 4-17, *"However, depending on the timing of the drawdown, it is possible that flow reductions during refill following drawdown could result in slightly decreased juvenile Snake River fall Chinook survival due to water temperature increases. Recent research has shown that the proclivity of juvenile Snake River fall Chinook to continue migrating as subyearlings diminishes during July (Cook et al. 2007). Through the summer an increasing fraction of Snake River fall Chinook entering Lower Granite Reservoir remain in the reservoir and migrate during the following year as yearlings. Thus, higher water temperatures in summer (which negatively affects the survival of both migrating and resident salmonids) become increasingly important..."*

0138_CWA_Parsons

From: Sierra Club on behalf of Claudia Parsons
To: PSMP
Subject: Please carefully consider dredging the Lower Snake
Date: Wednesday, May 01, 2013 7:05:39 PM

May 1, 2013

Army Corps of Engineers

Dear of Engineers,

9522 Costs and funding

In these times of limited federal dollars, it's absurd for taxpayers to subsidize barging when the same cargo could be more efficiently transported on existing railroad. The Corps should conduct an honest cost-benefit analysis that determines the benefits of this proposal outweigh the costs.

9523 / 9524 Aquatic resources; threatened and endangered species (aquatic)

The effects of dredging, including dumping dredge spoils into the reservoirs, may threaten Endangered Species Act-listed stocks of salmon and steelhead, which are in the system year-round.

Increased sediment load due to large forest fires - a result of climate change - will increase the flood risk to the city of Lewiston and would require an endless and unsustainable cycle of dredging at an ongoing cost to taxpayers.

Please do a cost benefit analysis to ensure that the benefits of this proposal outweigh such steep costs.

Sincerely,

Claudia Parsons
2148 Hollywood Blvd
Emmett, ID 83617-9517

0139_CWA_Pauley

From: Stephen Pauley
To: PSMP
Subject: Dredging above Lower Granite Dam
Date: Tuesday, April 09, 2013 2:09:29 PM

9518 Costs and funding

9519 Aquatic resources; general aquatic resources

Dear Sirs

My comments re dredging above Lower Granite Dam.

1. This is a good time to reevaluate the cost / benefit ratio of the four lower Snake dams.

2. Do the dredging costs make sense if the useful life of the 4 Snake dams is short.. Calculate the decommissioning costs for these dams vs repairs vs continuing dam improvements for fish passage. Do they warrant dredging?

3. Is the COE complying with the NW Power Act of 1980 that mandates that fish receive equal consideration as does energy production? Smolt barging has not increased native returns.to sustainable levels. The summer water temps below some Snake dams is higher than permitted for fall chinook survival.

4. Figure the costs of dredging into the future. Will dredging be needed too often to justify the expense?.

5.Figure the costs of govt. subsidies to operate the 4 dams and the zero cost to the barge and tour boat companies. The govt. should not in the business of keeping the Army COE fully employed at the sake of losing native salmon populations.

6. Is the whole intent of dredging to keep the Army COE at full employment and to justify the Walla Walla office?

9520 Dredging

7. Does dredging violate the CWA and the ESA?

Thank you
Stephen M Pauley MD
Box 3759
Ketchum, ID 83340
spauley4@gmailcom

9521 Environmental laws and regulations

0140_CWA_Pearson

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9486 Public hearing request

9485 Water quality, and sediment quality; water quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Theodora Pearson
3433 NE Davis St
Portland OR 97232

T. Pearson
3433 NE. Davis St.
Portland OR. 97232

PORTLAND OR 970
29 APR 2013 PM 2 1

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third ave.,
Walla Walla WA
99362-1876

99362187601

0141_CWA_Peterson

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9484 Water quality and sediment quality; sediment quality

9483 Public hearing request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

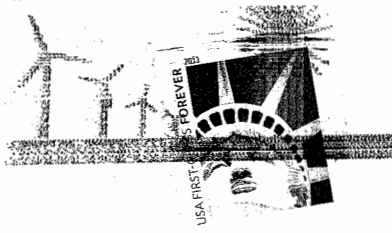
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

917 NW 59th st
Vancouver WA 98663

D. Peterson
917 NW 59th St.
Vancouver. Wa. 98663

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA,
99362-1876

99362187601

0142_CWA_PortofClarkston

From: Wanda Keefer
To: PSMP
Subject: Comments on Section 404 for dredging and in-water disposal of dredged materials
Date: Monday, April 29, 2013 10:00:42 AM
Attachments: Port comments on in-water disposal of dredged materials.pdf

---

Thank you for giving us the opportunity to comment (see attached). Please contact me if you have any questions.

Wanda Keefer
Manager, Port of Clarkston
509-758-5272

849 Port Way
Clarkston WA 99403
Phone: (509) 758-5272
Fax: (509) 758-1746
Email: Portofclk@clarkston.com
Web: www.portofclarkston.com

April 29, 2013

VIA ELECTRONIC (psmp@usace.army.mil) **AND FIRST CLASS MAIL**

U.S. Army Corps of Engineers
Walla Walla District, PSMP/EIS
Attention: Sandra Shelin
CENWW-PM-PD-EC
201 North Third Ave.
Walla Walla, Washington 99362-1876

Re: Section 404 for dredging and in-water disposal of dredged materials

9481 Dredged materials disposal

Dear Ms. Shelin,

The Port of Clarkston appreciates the opportunity to submit comments on the U.S. Army Corps of Engineers (USACE) proposed activity, subject to the provisions of Section 404 of the Clean Water Act of 1977 (Public Law 95-217).

The Port of Clarkston's position is that in-water disposal of dredged materials is a well-established beneficial use. The planned method to dredge, transport and place dredged materials is optimal for species in or near the river. Placement will follow natural, existing contours of land. Additionally, the Corps proposes to perform the dredging during the winter in-water work window, thereby minimizing any potential impacts.

We encourage approval of the work to move forward.

9482 General project support

Thank you for giving us the opportunity to comment on this issue.

Sincerely,

Wanda Keefer

Wanda Keefer
Port Manager

Port of Clarkston
Facilitating Sustainable Growth

849 Port Way
Clarkston WA 99403
Phone: (509) 758-5272
Fax: (509) 758-1746
Email: Portofclk@clarkston.com
Web: www.portofclarkston.com

April 29, 2013

VIA ELECTRONIC (psmp@usace.army.mil) **AND FIRST CLASS MAIL**

U.S. Army Corps of Engineers
Walla Walla District, PSMP/EIS
Attention: Sandra Shelin
CENWW-PM-PD-EC
201 North Third Ave.
Walla Walla, Washington 99362-1876

Re: Section 404 for dredging and in-water disposal of dredged materials

Dear Ms. Shelin,

The Port of Clarkston appreciates the opportunity to submit comments on the U.S. Army Corps of Engineers (USACE) proposed activity, subject to the provisions of Section 404 of the Clean Water Act of 1977 (Public Law 95-217).

The Port of Clarkston's position is that in-water disposal of dredged materials is a well-established beneficial use. The planned method to dredge, transport and place dredged materials is optimal for species in or near the river. Placement will follow natural, existing contours of land. Additionally, the Corps proposes to perform the dredging during the winter in-water work window, thereby minimizing any potential impacts.

We encourage approval of the work to move forward.

Thank you for giving us the opportunity to comment on this issue.

Sincerely,

Wanda Keefer

Wanda Keefer
Port Manager

PORT OF CLARKSTON
849 PORT WAY
CLARKSTON, WASHINGTON 99403

SPOKANE WA 990

29 APR 2013 PM 3 L

USA
Justice
FOREVER

U.S. Army Corps of Engineers
Walla Walla District, PSMP/EIS
Attention: Sandra Shelin
CENWW-PM-PD-EC
201 North Third Ave.
Walla Walla, Washington 99362-1876

9936218760l

0143_CWA_PortofLewiston

From:	Jaynie
To:	PSMP
Cc:	David Doeringsfeld
Subject:	Port of Lewiston/In-Water Disposal Comments - Due Apr 30
Date:	Tuesday, April 30, 2013 9:57:12 AM
Attachments:	Port of Lewiston Comments.PDF

U.S. Army Corps of Engineers

Walla Walla Dist, PSMP/EIS

Attention: Sandra Shelin

CENWW-PM-PD-EC

201 North Third Ave

Walla Walla, WA 99362-1876

Ms Shelin ~

Please find attached, the Port of Lewiston comments due April 30 regarding in-water disposal for the PSMP.

Thank you,

Jaynie Bentz

PORT OF LEWISTON

1626 6th Ave North

Lewiston, ID 83501

208.743.5531

Port of Lewiston

1626 6th Avenue N. • Lewiston, ID 83501
(208) 743-5531 • Fax (208) 743-4243
E-mail: portinfo@portoflewiston.com
Container Yard
(208) 743-3209 • 1-877-777-8099

April 29, 2013

VIA ELECTRONIC (psmp@usace.army.mil) **AND FIRST CLASS MAIL**

U.S. Army Corps of Engineers
Walla Walla District, PSMP/EIS
Attention: Sandra Shelin
CENWW-PM-PD-EC
201 North Third Avenue
Walla Walla, WA 99362-1876

RE: SECTION 404 FOR DREDGING AND IN-WATER DISPOSAL OF DREDGED MATERIALS

Dear Ms. Shelin,

9479 General project support

The Port of Lewiston appreciates this opportunity to submit comments on the U.S. Army Corps of Engineers (USACE) proposed activity as allowed under the provisions of Section 404 of the Clean Water Act of 1977 (Public Law 95-217).

The Port of Lewiston supports the efforts thus far conducted by USACE to restore and maintain the federal navigation channel to its Congressionally authorized dimensions of 14 feet deep by 250 feet wide at minimum operating pool. Sediment accumulation has negatively impacted the Port of Lewiston and its customers to safely maximize the economic benefits barging offers to industry stakeholders. As a marine highway, maintenance is necessary to keep commerce moving.

In-water disposal of accumulated sediment into identified areas that support habitat is a balanced approach to maximize the multiple use benefits of the Columbia-Snake River System. The Port of Lewiston supports the location of the proposed in-water disposal site and the need to implement this project.

Thank you for this opportunity to comment on this issue.

9480 Dredged materials disposal

PORT OF LEWISTON
David R. Doeringsfeld

Port Manager

0144_CWA_RedfishBluefish

From: Scott Levy
To: PSMP
Subject: Comment regarding Water Quality Certification of Programmatic Sediment Management Plan
Date: Monday, April 29, 2013 12:36:32 PM

9474 Water Quality, and sediment quality; sediment quality

To Whom It May Concern:

"As good stewards of the environment, we always seek to prevent pollutants from entering the river," said District Commander Lt. Col. David Caldwell in a statement (Tri-City Herald, February 4, 2012).

Hoping that this is a true statement and that the Tri-City Herald's Annette Cary did not misquote the Lieutenant Colonel, I am curious to know why the same ACOE district would seek to dispose of dredge spoils into the Lower Snake River. The Corps Draft Environmental Impact Statement (December 2012) clearly states that the dredge spoils are not anticipated to be free of pollutants. I read that the recently established (1998) criteria for disposal were met by most of the samples, as such, the ACOE feels comfortable with putting this soils back into the river. Not being free of pollutants, this approach in which dredge spoils are deposited into the river appears to contradict the District Commander's assertion.

Excerpt from Corps' Draft Environmental Impact Statement date December 2012:

9575 Dredged materials disposal

p) was detected in one elutriate sample from the Port of Clarkston but did not trigger any of the criteria previously mentioned. Most of the metals data met the guidelines as well. One exception was the mercury concentration in one sediment sample from the Port of Clarkston, less than the SEF and SMS criteria. Dioxin and furan toxic equivalents (TEQs) were calculated for the sediment and elutriate and were consistent with the results of previous studies in agricultural soils in Washington and less than Puget Sound background levels. Based on the results from the study, the sediments at the Port of Clarkston, Port of Lewiston, and the navigation channel in the confluence area meet the chemical and physical criteria for open and unconfined in-water placement. Additionally, sediments within the LSRP are not expected to require special management prior to handling or placement and would not be considered as industrial or hazardous waste."

It seems to me that it would be a better environmental choice to place the dredge spoils upon the land, rather than back into the river. Is that not correct? Depositing dredge spoils on land appears to make sense because one of the main reasons the Federal Action Agencies, of which the ACOE is a major part, decided against partial removal of four Lower Snake River dams is due to "Uncertainty about possible harmful effects associated with the potential resuspension of contaminants in sediments." (Glen Squires, Wheat Life, April 2002). So I wonder now, when putting forward dredging and resuspension as a preferred alternative, why this resuspension of contaminants is not a major concern.

In the proposal now under consideration, it is my understanding that the ACOE will not be requiring sampling of soils before dredge spoils are placed back in the river. Apparently the limited amount of samples already taken are good enough for the ACOE to feel confident that the uncertainty "associated with the potential resuspension of contaminants" has been addressed. If that were to be accurate statement of the ACOE position, then the same methodology could be applied to reduce the uncertainty "associated with the potential resuspension of contaminants" in considering the Dam Breach alternative of the "Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement (FR/EIS)."

That said, it would seem to me that if the ACOE decides to release dredge spoils back into the Lower Snake, then an identical methodology could be utilized to eliminate the uncertainty "associated with the potential resuspension of contaminants" in the dam breach alternative studied in the FR'EIS quoted

9476 Water Quality, and sediment quality; sediment quality

9477 Water Quality, and sediment quality; sediment quality

above. For instance, if the current dredge project takes one percent (or tenth of one percent) of the sediment that has accumulated in the Lower Snake reservoirs, then taking 100 times (1000 times) as many samples could sufficiently reduce the uncertainty "associated with the potential resuspension of contaminants." To date, the ACOE has yet to propose this viable and reasonable approach in considering the dam breach alternative. Moreover, this viable and reasonable approach was not mentioned in the "Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement (FR/EIS)."

Have I missed something in the statistical analysis here? If so, I would appreciate your response to this comment to include appropriate corrections. With these corrections, if any, then it seems a viable alternative would be put forward, an alternative that the "Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement (FR/EIS)" failed to mention in studying the Natural River Drawdown Alternative.

Flipping the discussion the other way, it would seem prudent if the recommendations (see below) from the ""Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement (FR/EIS)" should be followed before the dredge spoils are resuspended in the Lower Snake River. To concisely put what I am trying to say, the two reports should be consistent as they come from the same ACOE district separated by less than fifteen years in time. If your agency does not believe that these reports need to be consistent then a response to this point is to be expected to be forthcoming.

9478 Alternatives

Regards,

Scott Levy
Host of www.bluefish.org

Below are relevant excerpts from "Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement (FR/EIS)"

The following recommendations would assist in gaining a better understanding of any potential risks to organisms should the Natural River Drawdown Alternative be implemented.

1. Complete a report for the 1997 Lower Snake River Feasibility Study Sediment Quality Analyses.
2. The report should include sample collection methods, composition of sediment samples, locations of sample sites, analytical methods, results, and discussion.
3. Appropriate sediment management reports should be referenced, and exceedences in recommended management concentrations should be flagged.
4. Additional sampling of the sediments should occur to develop a better understanding of the distribution and concentrations of elements and compounds in the impounded sediments.
5. Integrated depth sampling down to native sediment, where possible, in areas most likely to become resuspended during the drawdown, would provide the most useful analytical data.
6. Analyses of sediment should include heavy metals; organochlorine, organophosphorus, and carbamate pesticides; PCBs; dioxins; furans; and, total petroleum hydrocarbons.
7. Samples should be analyzed using appropriate detection limits sensitive enough for concentrations that may cause adverse effects to aquatic organisms.
8. In addition, toxicity tests should be performed and should include effects of a range of concentrations within realistic durations of exposure.
9. Bioassays, such as the H4IIE bioassay, could be applied for testing rather than a full analysis to measure dioxin-like compounds (dioxins, furans, and coplanar PCBs) activity.
10. Detection limits of any bioassay should be no greater than one pg/g.
11. To establish existing concentrations of the compounds expected to be released from the lower Snake River reservoirs, baseline 'pre-drawdown' sediment sampling should occur in the McNary Pool where the bulk of impounded sediment is predicted to be deposited.
12. Gather additional data to address how interdependent and interrelated actions of the

drawdown could impact the lower Snake and Columbia rivers contaminant loading.

13. Consider resuspension of contaminated materials as a point source discharge. Estimate the additional loading of DDT and metabolites, PCBs, and dioxin-like compounds (dioxin, furan, and planar PCBs), metals, organochlorine and organophosphorus pesticides, and petroleum hydrocarbons by determining the total amount of each contaminant (based on concentrations from chemical analysis on samples from a set amount of material) within the total amount of material to be resuspended.

14. Report estimates to the appropriate state environmental quality personnel to determine if additional loading would violate current water quality standards for the lower Snake and the Columbia rivers.

9.5 Environmental Contaminants (with Natural River Drawdown Alternative)

Effects to aquatic and terrestrial organisms from the Natural River Drawdown Alternative are complex. The drawdown of the lower Snake River reservoirs poses potential toxicological threats to fish and wildlife and their habitat from Lewiston, Idaho, to the Pacific Ocean. At this time, the effects to fish and wildlife resources from the resuspension of impounded sediment into this dynamic system are difficult to determine. Point and nonpoint sources of environmental contaminants have been identified from upstream agricultural and industrial origins, and some would be found in sediments behind the dams. These contaminants are known, under certain conditions, to cause adverse effects to aquatic-related organisms. However, information on the contaminants in the sediments and their distribution is insufficient to fully evaluate whether or not adverse impacts to organisms could result from drawdown.

9.5.1 Redistribution of Sediments

Should the Natural River Drawdown Alternative be implemented, redistribution of sediments would occur, altering the morphology and potentially the water quality of the lower Snake River. Approximately 50 percent of the 76.5 to 114.7 million cubic meters (100 to 150 million cubic yards) of sediment impounded behind the four dams is projected to erode and be transported downstream within the first few years following the breaching of the dams. Most of the fine sediments are anticipated to settle in the McNary Pool in the Columbia River. The very fine sediments that do not settle in the McNary Pool would continue to be transported downstream and ultimately settle in the Columbia River Estuary or the Pacific Ocean. If redistributed sediments contain certain levels of contaminants, they could pose a threat to fish and wildlife resources.

The resuspension and deposition of sediments resulting from the Natural River Drawdown Alternative may have varying effects on organisms. Potential threats to fish and wildlife from contaminated sediment and impaired water quality include increased availability of contaminants to organisms and potential exposure of additional contaminants during critical life stages. Increased exposure to contamination may affect organisms directly, bioaccumulate through the food chain, alter the prey base, or cause alterations of habitat. Adverse effects to fish and wildlife species from exposure to toxic levels of contaminants may include mortality, physiological responses, impaired reproduction, immune system alterations, behavioral changes, or avoidance or loss of important habitat. The timing of release of the impounded sediment is important. Untimely resuspension of sediments could have detrimental effects to some organisms. Exposure of organisms in the lower Snake River to newly available contaminated sediment could be relatively short (acute exposure) in some areas and longer term (chronic exposure) in other locations. Acute exposure would occur following the initial breaching of the dams causing resuspension of sediment. Long-term exposure (chronic exposure) of organisms to contaminated sediment would occur in the Snake and Columbia rivers where contaminated sediments would settle.

The removal of the four lower Snake River dams could make additional contaminated water and sediment available to organisms. When the earthen portions of the dams are removed during

implementation of the Natural River Drawdown Alternative, sediment behind the dams would be resuspended. This would expose fish, wildlife, and their habitat to potentially toxic concentrations of resuspended contaminants. The eroded materials would most likely be redeposited in Lake Wallula (McNary Pool) between the Snake River and the Wallula Gap on the Columbia River. Depending on the timing and route of deposition of resuspended sediment, impacts from contaminated sediment to fish and wildlife would vary. Sediment resuspended in the water column would become available to organisms by direct uptake.

9.5.2 Resuspension

Resuspension of sediments from drawdown is of concern to the health of fish and wildlife resources. The fine sediments would be suspended in the water column for an unknown period of time before their anticipated settling in the McNary Pool and locations further downstream in the Columbia River. Resuspending large volumes of potentially contaminated sediment could expose organisms to concentrations of compounds that could have sub-lethal or lethal effects. Released water and sediment may affect fish and wildlife resources through direct exposure and bioaccumulation through the food chain. Wind and rain erosion and channel incision processes will also contribute to additional sediment resuspension. Potentially contaminated sediments entering the Columbia River would contribute to an already impacted system.

9.5.3 Deposition

Some of the material deposited within the lower Snake River may create shoals and/or sand bars. Fine materials accumulating in shallow areas, mud flats, or other depositional zones would become available to organisms living in or utilizing these areas for foraging. Waterfowl, wading birds, and other birds and mammals would become exposed to potentially contaminated sediment by foraging in these habitats. Sediments settling in the McNary Pool may possibly remain there for a long period of time. Contaminated sediments redeposited in the McNary Pool could pose a threat to waterfowl and other migrating birds that utilize the McNary National Wildlife Refuge.

9.5.4 Exposure of Sediments

Following implementation of the drawdown, some sediments would be resuspended quickly. Other sediments would become resuspended more slowly through erosion from heavy rain, flood events, wave action along the newly created shoreline, and changes as the river meanders. Contaminated sediment that had been entrapped and unavailable to organisms would be mobilized. This may prolong the exposure time of organisms to potentially contaminated sediment.

9.5.5 Environmental Contaminants

Environmental contaminants have and continue to enter the lower Snake River from a variety of non-point and point sources. Sources include agricultural runoff, paper and pulp mills, storm water runoff, grazing, domestic wastes, and hazardous materials releases. Under current reservoir conditions, elements and compounds are bound to sediment and organic matter and are present in the pore water (water in between the sediment) and open water. The release of impounded water and sediment during the drawdown alternative will disrupt existing conditions in the reservoirs and the lower Snake River and the Columbia River. Changes in water quality parameters such as temperature, pH, hardness, alkalinity, and salinity can alter the toxicity and degradation rate of some of the compounds in the water and sediments currently in the system. Organic compounds can become biologically available when

sediments are disturbed. However, the amount of desorption that occurs depends primarily on sediment composition and the persistence and concentration of the chemical (Thomas 1996). Once liberated into the environment, it is unknown what the interdependent and interrelated reactions of the sediment, organic matter, and water may be. When multiple contaminants are present in a system, effects can be additive, synergistic, or antagonistic. This means the combination of toxicants in the environment could produce a response that is simply additive or greater or less than that expected by addition of these individual responses. Impacts to fish and wildlife from contaminants in the lower Snake River and Columbia River systems will change as the physical and chemical properties of the water and sediment changes from the drawdown event.

It is difficult, with existing information, to determine what the potential toxicity to organisms may be considering the large quantities of sediment and water, variety of compounds, and anticipated reactions that would be created by the drawdown scenario. Many of the toxic compounds that have, are, and will enter the river have chemical properties that bind or adhere to sediment particles and persist in the environment for many years. Contaminants are most often associated with the fine sediment particles because of their high surface area to volume ratio. Some of the chemical properties of these compounds enable them to persist in the environment at high enough concentrations to cause injury to organisms. Availability of contaminants is greatly affected by physical characteristics of sediments such as particle size, distribution, total organic carbon and mineral composition (Seelye and Mac, 1984).

Organochlorine and organophosphate pesticides, petroleum hydrocarbons, dioxins and furans, heavy metals, and PCBs, have been detected in the lower Snake River system. Resuspension of these compounds resulting from the Natural River Drawdown Alternative would increase the bioavailability of these contaminants to organisms. Seelye et al. (1982) have shown that persistent compounds such as DDE and polychlorinated biphenyls (PCBs) can be accumulated by fish directly from exposure to resuspended sediments. Low concentrations of persistent compounds such as some organochlorine pesticides, PCBs, dioxins, and furans can bioaccumulate within the food chain and impair reproduction in top level predators, such as the bald eagles. In addition, many of these organochlorine compounds disrupt the immune or endocrine system, and very low concentrations of these chemicals could impact fish and wildlife during sensitive life stages.

The U.S. Environmental Protection Agency (EPA) has classified the middle Snake River as having marginal water quality (PNL, 1995). Sampling and characterization of sediments in the lower Snake River has been limited. An EPA report (EPA, 1992) has identified pesticide problems in the Clearwater River which enters the lower Snake River system in the upper end of the Lower Granite Reservoir. Contaminants related to industrial sources along the lower Snake River have been detected during sediment sampling studies by the Corps (Anatek Labs, Inc., 1997) and Potlatch Corporation'92s Lewiston Complex (Potlatch, 1998). Sediment and water samples collected by the Corps during the 1997 Lower Snake River Sediment Quality Study detected concentrations of organochlorine and organophosophorus pesticides and heavy metals known to have toxicological effects to aquatic species. However, detection limits for other pesticides and metals of concern, such as mercury, DDT, dieldrin, endrin, and chlorpyriphos, were not low enough to detect concentrations of the compound at levels that are of concern to the health of aquatic organisms.

Although some sediment samples collected contained some detectable levels of environmental contaminants of concern to fish and wildlife, the distribution and concentrations of many contaminants in the lower Snake River system is still not well documented. Contaminant bioavailability from sediments is difficult to evaluate. The factors affecting the availability and toxicity of compounds to aquatic species are complex. Bioavailability of sediment-bound contaminants is a chronic exposure problem that cannot be determined by bulk-sediment analysis or elutriate testing alone (Cain, 1989). Bulk-sediment analysis does not take into account the potential changes in toxicity of compounds influenced by changes in the environment such as the drawdown alternative or physiological modifications within organisms. As the water chemistry changes during an event such as the drawdown, the chemistry of the sediment bound contaminants is also altered. This alteration of water and sediment chemistry may increase the bioavailibility of some contaminants to the aquatic environment. In addition, elutriate testing of sediments is designed to analyze the concentrations of water soluble compounds and does not evaluate the nonsoluble compounds bound to the sediment. Therefore, it is difficult to make a determination of

the potential effects to the aquatic environment with existing information and without further investigation.

The time of year for initiating the Natural River Drawdown Alternative is also important. Toxicological effects to organisms are likely to be greatest should they become exposed to contaminated water or sediment during sensitive life stages. These life stages include migration, breeding, spawning, and early life stages. Health of the migrating and spawning Chinook salmon are of concern should a fall drawdown occur. Direct exposure to resuspension of contaminated sediments could cause adverse physiological effects to migrating fish, eggs, and fry/smolt. A spring or fall drawdown could also expose migrating birds and waterfowl to potentially toxic water and sediment.

Implementation of the Natural River Drawdown Alternative will redistribute sediments altering the morphology and water quality of the lower Snake River. The removal of the four lower Snake River dams will release potentially contaminated water and sediment not currently available to organisms. Industrial and municipal practices within the lower Snake River basin have contributed, and continue to contribute, organochlorine and organophosphate pesticides, petroleum hydrocarbons, dioxins and furans, heavy metals, and PCBs to the system. Increased exposure to contamination from the drawdown alternative may affect organisms directly, bioaccumulate through the food chain, or alter the prey base. Available data are insufficient to determine potential toxicological effects of the Natural River Drawdown Alternative to fish and wildlife. With existing information, it is not possible to determine the exact effects contaminants in the lower Snake River system may have on fish and wildlife resources.

0145_CWA_Reisch

From: Sierra Club on behalf of Becky Reisch
To: PSMP
Subject: Please carefully consider dredging the Lower Snake
Date: Wednesday, May 01, 2013 3:05:17 PM

May 1, 2013

Army Corps of Engineers

Dear of Engineers,

9471 Costs and funding

In these times of limited federal dollars, it's absurd for taxpayers to subsidize barging when the same cargo could be more efficiently transported on existing railroad. The Corps should conduct an honest cost-benefit analysis that determines the benefits of this proposal outweigh the costs.

9472 Aquatic resources; threatened and endangered species (aquatic)

The effects of dredging, including dumping dredge spoils into the reservoirs, may threaten Endangered Species Act-listed stocks of salmon and steelhead, which are in the system year-round.

Increased sediment load due to large forest fires - a result of climate change - will increase the flood risk to the city of Lewiston and would require an endless and unsustainable cycle of dredging at an ongoing cost to taxpayers.

9473 Hydrology and sediment; watershed sediment production

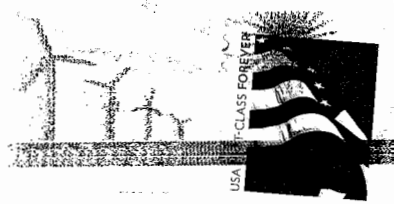
Please do a cost benefit analysis to ensure that the benefits of this proposal outweigh such steep costs.

Sincerely,

Ms. Becky Reisch
8676 State Highway 78
Marsing, ID 83639-8206

G. Rinehart
3757 SE Clay St.
Portland OR. 97214

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,

201 N. Third Ave.,
Walla Walla WA.
99362-1874

9936218760 1

0146_CWA_Rinehart

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9469 Public Hearing Request

9470 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Gregory D Rinehart

3757 SE Clay St
Portland, OR 97214

0147_CWA_Serrano

From: nick serrano
To: PSMP
Subject: No!
Date: Tuesday, April 09, 2013 4:21:52 PM

I am an avid fisherman and think this is a terrible idea. Please do not dredge the lower snake river!

9468 Dredging

0148_CWA_Tanner

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9466 Public Hearing Request

9467 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

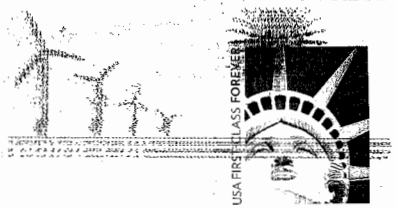
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Sabrina Tanner 2947 NE 65th Ave PDX 97213

S. Tanner
2947 NE. 65th ave.
Portland OR. 97213

PORTLAND OR 970
29 APR 2013 PM 5 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third ave.,
Walla Walla WA.
99362-1876

99362187601

0149_CWA_Tourtillott

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9464 Water Quality and Sediment Quality; Sediment Quality

9465 Public Hearing Request

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

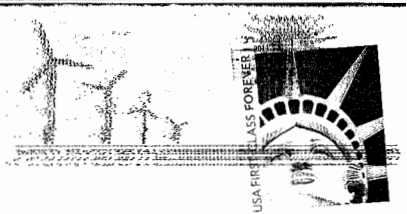
Brett Tourtillott

2622 SE BELMONT ST

PDX OR 97214

B Tourtellott
2622 SE. Belmont. ST
Portland OR. 97214

PORTLAND OR 970
29 APR 2013 PM 5 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS Attn. Sandy Shelin, CENWW-PM-PD-EC,

201 N. Third Ave.
Walla Walla WA.
99362-1876

99362187601

0150_CWA_Trunn

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9462 Public Hearing Request

9463 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

John Trunn
5935 SW Homesteader Rd
Wilsonville OR 97070

J. Trump
5935 SW. Homesteader Rd.
Wilsonville OR 97070

PORTLAND OR 970
29 APR 2013 PM 5 L

USA FIRST-CLASS FOREVER

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.
Walla Walla WA.
99362-1876

99362187601

1353 SE. 32nd Ave.
Portland OR 97214

PORTLAND OR 970
29 APR 2013 PM 5 L

USA FIRST-CLASS FOREVER

U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave.,
Walla Walla, WA.
99362-1876

99362187601

0151_CWA_Unknown

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9460 Public Hearing Request

9461 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

1353 SE 32nd Ave
Port. OR 97214

0152_CWA_Widener

From: Joseph Widener
To: PSMP
Subject: EIS
Date: Thursday, April 18, 2013 6:03:54 PM

April 19, 2013

US Army Corps of Engineers

Walla Walla District

Refer to: Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement (December 2012)

Dear Army Corps of Engineers,

I am writing as a concerned citizen who loves both the Columbia and Snake rivers. My family and I are frequent recreational users of these rivers, and we frequently eat fish harvested from this watershed.

9456 NEPA; no action alternative

I am writing to comment on the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

9457 Dredging

I am asking for alternative number 1 to be implemented. It is the action of no action. I am choosing this alternative because neither alternatives 5 nor 7 consider all of the authorized purposes stated in the Lower Snake River Draft Programmatic Management plan Environmental Impact Statement. Your authorized purposes in that document are stated as: commercial navigation, hydroelectric power generation, recreation, and fish and wildlife conservation. It seems to me that the only authorized purpose you are mitigating for in alternative 5 or 7 is commercial navigation. There are two authorized purposes that are clearly neglected in these alternatives - those are 1) fish and wildlife conservation with respect to wild salmon and 2) recreation. Dredging, which ultimately is what alternatives 5 and 7 are proposing, will have no beneficial effect on salmon population recovery – in fact it would most likely have a negative effect. Also stated in the environmental impact assessment, is that the Army Corps of Engineers plans to consider potential beneficial use of dredged material with one of the beneficial uses to create submerged fish habitat with the dredged material. This makes no sense. How could contaminated material dredged from the four reservoirs (Ice Harbor, Federal Channel, Port of Lewiston and Port of Clarkston) be of any benefit to salmon if put in the Lower Granite Reservoir. If this sediment was detrimental for salmon in the first four reservoirs than why would it be of any benefit for salmon in a different reservoir.

9458 Dredged materials disposal

Another factor not being considered within alternatives 5 or 7 is recreation. By dredging the

9459 Water quality, and sediment quality; sediment quality

contaminated sediment from these reservoirs, the amount of contaminants that would be dislodged and sent downstream would be considerable. I live in Portland Oregon, near the Columbia River, and I don't want this contaminated sediment in my river where my kids and I play. Dredging the sediment in these reservoirs would directly impact the recreational potential of both the Snake and Columbia rivers anywhere downstream.

Due to these stated factors, I am in favor of alternative 1 which is no action. Until you come up with an environmental impact assessment that clearly considers all the authorized purposes stated in your document, I believe nothing should be done.

Thank you for your consideration as we all work towards a healthier, cleaner river system.

Sincerely,

Joseph Widener

1706 Se 37th

Portland Oregon

97214

0153_CWA_Widener

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9340 Public Hearing Request

9341 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

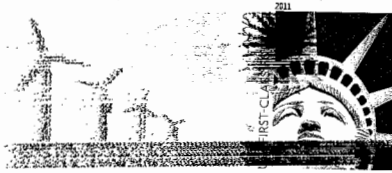
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

Joseph Widener
1706 se 37th
portland, ok
97214

J. Widener
1706 SE 37th
Portland, OR. 97214

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third Ave,
Walla Walla WA.
99362-1876

0154_CWA_Wittman

From: Ron Wittman
To: PSMP
Subject: Dredge permit at Snake-Clearwater Confluence and Adjacent Ports
Date: Thursday, April 11, 2013 2:33:13 PM

I submit my original comments with a few small additions/corrections. Thank you.

9339 General project support

To All Concerned;

I am in total support of the continued dredging of the Snake and Clearwater rivers for the purpose of river barge traffic up to and back out of the Ports of Lewiston, Clarkston and Wilma. The continued use of the river system for receiving and delivering product in and out of our area is critical to the economies of many states, not just our own. This system was put into place after much thought and consideration way before my time on this earth. It is vital to the strengths of the agricultural industry, timber industry, power industry, tourism industry and many many more. My father (B.H. Bob Wittman) was a Port of Lewiston commissioner for 22 years and I was proud to hear of the great things that this river system provides. I would hate to see his time and dedication, along with all the other port commissioners, managers and supporters along the river system, who have fought so hard to keep this a vital and prosperous "Highway system" to the rest of the world, be discontinued because of the idle meaningless complaints from the people opposing this project. I keep hearing of the costs associated with dredging. Why doesn't the opposition bring into the equation the costs associated with of the upkeep/rebuilding of our highways, railroads and other infrastructure needs if this system goes away? It is because of their narrow vision and self-serving interests. We need to look at this project openly and look farsighted into the future, for all our wellbeing. The costs associated with the savings of fuel alone should be enough. Not to mention the one lane in each direction highways leading into the Lewis-Clark Valley and on to the east, south, and north. The river system is our freeway and we need it just as any city/town along an interstate freeway system. I thank you for your time and hope that you continue on with dredging and maintaining our river system as it was intended.

Ronald J. Wittman
Former Nez Perce County Commissioner 2003-11'
and now concerned local private citizen

0155_CWA_Wolf

April 22, 2013

To: Sandy Shelin
U.S. Army Corps of Engineers, Walla Walla District
201 N. Third Ave
Walla Walla, WA 99362-1876

9337 Public Hearing Request

9338 Water Quality and Sediment Quality; Sediment Quality

Dear Sandy,

I am writing to request a public hearing in response to the Lower Snake River Draft Programmatic Sediment Management Plan Environmental Impact Statement.

My family and I love both the Columbia and Snake rivers. We are frequent recreational users of these rivers, and frequently eat fish harvested from this watershed.

I live in Portland Oregon and am very concerned about the dredging that is being proposed behind the dams along the lower Snake river. The amount of sediment and contaminants that would be dislodged and sent downstream in this process would be considerable. This would directly impact the ecology and recreational potential of both the Snake and Columbia all the way downstream. This would impact my family and I - as well as every other recreational user along these two great rivers.

For these reasons I am asking for a public hearing. Furthermore, I am asking that this hearing be held in a place that is more easily accessible to Portland / Vancouver area residents (the previous hearing that was held in Lewiston, ID was not easily accessible – thank you very much). Portland / Vancouver has the highest population of any area within the Columbia Basin. The people of the Portland area would be impacted by this proposed dredging and they should have a say in the matter.

In fact, because the effected area would extend from Lewiston, ID all the way to Astoria, OR (effecting people in three different states - over 500 river miles) you might consider having two different hearings – one in Lewiston for the upper watershed and one in Portland for the lower watershed.

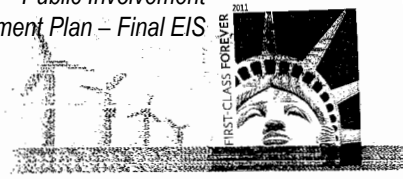
Thank you for your consideration with these matters. We are all working together towards a healthier, cleaner river system.

Sincerely,

3236 NE 58th Ave
Portland, OR 97213

S. Wolf
3236 NE. 58th Ave.
Portland OR. 97213

PORTLAND OR 970
29 APR 2013 PM 2 L



U.S. Army Corps of Engineers, Walla Walla District
PSMP/EIS, Attn. Sandy Shelin, CENWW-PM-PD-EC,
201 N. Third ave.,
Walla Walla WA.
99362-1876

9936218760l